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### THE MORTALITY IN AUSTRALIA FROM CANCERS PECULIAR TO THE MALE.

By H. O. LANCASTER,

School of Public Health and Tropical Medicine,  
Sydney.

In two previous papers (Lancaster, 1950 and 1951), I have dealt with the mortality from cancer (all forms combined) for the two sexes, and from cancers peculiar to the female. Cancers peculiar to the male are dealt with here, cancers of other sites common to both sexes being left to be discussed at a later date. The cancers peculiar to the male are cancer of the prostate, cancer of the testis, cancer of the scrotum and penis, and unspecified cancers of the male genital organs. The assignment of cancer of the male breast has always presented a problem, but it seems best to include a discussion of it here also.

#### The Age Distribution of the Deaths from Cancer in the Male.

The arbitrary nature of the distribution of the cancer deaths by age has already been pointed out, during the analysis of the female deaths from cancer (Lancaster, 1951). The age distribution of the male deaths is given here in Table I in a comparable form, the method used being to imagine a life-table population of one million males submitted to the same rates of mortality from cancer as exist in the actual population. This method of studying the death rates from individual causes was first introduced by William Farr (1875), and has been further developed by Brownlee (1922), by Dublin, Kopf and Lotka (1927), and by Dublin and Lotka (1936). As was pointed out in

the previous paper (Lancaster, 1951), this method has the advantages of getting rid of the effects of peculiarities of the age distribution of the population observed and of graphical convenience.

In Figure I the total cancer death rates for males in Australia in the years from 1931 to 1940 are plotted by age. A detailed consideration of the cancer deaths under the age of twenty-five years being excluded, the cancer death rates increase throughout life. This curve of the cancer death rates is concave upwards or, in other words, the increase in rates with age becomes more rapid at the higher ages. This graph can be compared with the corresponding one for females drawn to the same scale (Lancaster, 1951), which it resembles closely in form. A better comparison of the death rates for males and females is to be found in Figure I of another paper (Lancaster, 1950), in which the logarithms of the rates are plotted against the age. The cancer rates tend to increase geometrically with age as an approximation, so that with the semilogarithmic scale the graph is practically a straight line. Although the death rates increase with age, in an actual or life-table population the deaths by age attain a maximum and then decline, as is shown in Figure I.

In keeping with the treatment of the female cancers, the deaths by age in the life-table population are given for the common cancers in Figures IIA and IIB. The only cancer peculiar to males that rivals the cancer of the breast or uterus in numerical importance is cancer of the prostate. However, several of the other cancers are far more common in the male than in the female, notably cancer of the stomach and duodenum, oesophagus, mouth, respiratory system and skin, whereas cancers of the liver and of the intestines are more common in females. Such comparisons are best made after the death rates from the cancers from individual sites have been given.

### The Mortality from Cancer of the Prostate.

The death rates from cancer of the prostate are given in Table I. This is a negligible cause of mortality before the age of forty-five years. It increases in importance until at ages above sixty-five years it is responsible for over a seventh of all cancer deaths. When the mortality rates are compared for any age group over the five periods, an increase in mortality from cancer of the prostate is apparent for all the higher age groups. Whether this increase is real in the sense of being independent of changes in diagnosis, it is impossible to say, although it is known from clinical experience that cancer of the prostate is more likely to have been diagnosed in the more recent years than formerly. The most likely rubric of the "International List of Causes of Death", from which it might be expected that transfers would occur to the rubric "cancer

the same age (Lancaster, 1951). It seems reasonable to ask if there is any relation between the male cancers and conjugal state. In *Demography*, the annual bulletin of the Bureau of Census and Statistics, Canberra, all the peculiarly male cancers are grouped together for the tabulations concerning conjugal condition. An inspection of the mortality rates of Table IV will show that at the higher ages, say over fifty-five years, the group may be considered as chiefly cancer of the prostate and in the very early years as chiefly cancer of the testis. At each age *Demography* divides the cancer deaths into those of the never-married, the married with children, the married without children, the married with unstated issue and those with conjugal state unstated. I have omitted those two last groups in the following discussion. In order to obtain sufficient numbers, the experience for the years 1942 to 1949 has

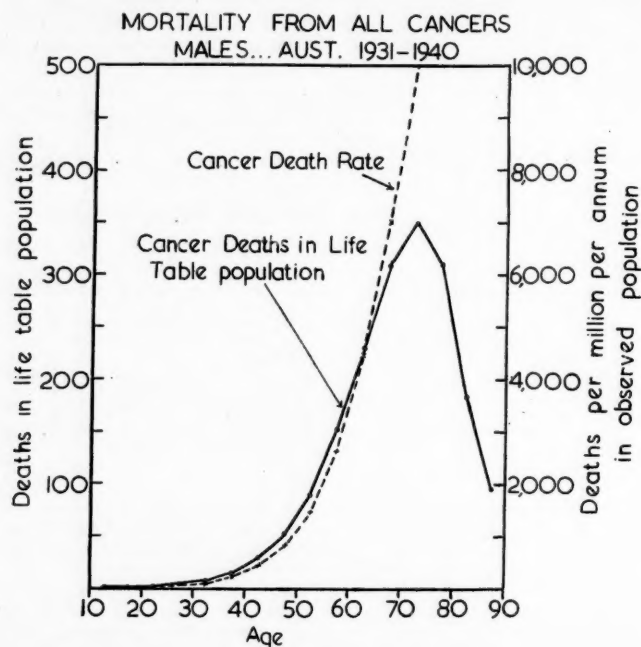


FIGURE I.

(a) The mortality for males in Australia from all cancers as a whole as deaths per million per annum by age, and (b) the expected number of deaths per annum in a standard million for each five-year age group. Arithmetic grid. (Note that the figures in the paper are drawn to the same scale as in Lancaster, 1951. In that paper, however, Figure I unfortunately showed the captions at the sides interchanged.)

of the prostate", is the one "diseases of the prostate", which in the earlier revisions of the list was not further subdivided. In the fifth revision of the list in 1938 this rubric was subdivided into "hypertrophy of the prostate" and "other diseases of the prostate". But for the years 1941 to 1945, in Australia there were 2658 deaths from hypertrophy and 412 deaths from other diseases, so that it may be taken that this rubric "diseases of the prostate" refers almost entirely to hypertrophy of the prostate throughout the years 1908 to 1945. In Table II are set out the death rates from diseases of the prostate in Australia. The death rates from this class of diseases have remained relatively constant over the period considered, 1908 to 1945. It seems, therefore, that the increase in the prostate cancer rates cannot be ascribed to transfers from this rubric.

### The Conjugal State of Males Dead of Prostatic Cancer.

Comparisons of the conjugal state of females dead of cancers of the breast and genital organs have been made with that of females dead from other forms of cancer at

been pooled to form Table III. The experience for the year 1941 has been excluded, as it includes a classification of the married by divorce and widowing, which makes it not comparable with the other years. The distribution of the deaths from the genital cancers among the three conjugal classes has been compared for each age group with the distribution of all cancer deaths at the same age by the  $\chi^2$  test for homogeneity. In two groups the deaths from cancer of the prostate cannot be regarded as homogeneous with those from cancers of all other sites. There is an excess of the married with children over the proportion expected and a corresponding defect of those never married and married without children. It is difficult to assess the meaning of these findings, if indeed they do reflect any biological causation. Thus some sort of infective hypothesis might be invoked, as now appears to be needed to explain the fact that it is the married women rather than the women with children who are more prone to cancer of the uterus (which has in the past been taught as being due to trauma of child-bearing on the uterine cervix). There is no additional information available

from the official statistics which would enable one to elaborate any hypothesis to explain the findings of Table III.

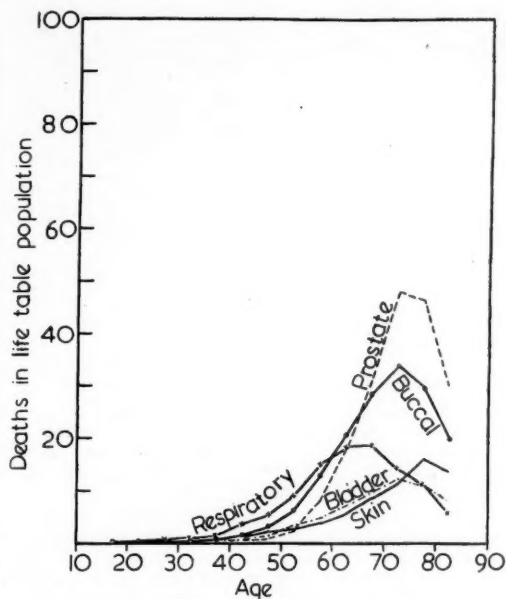


FIGURE IIa.

The deaths by age in the standard population for certain cancers of the male. The standard population is that of the 1933 male life table, and the cancer rates may be taken as based on the same experience, Australia, for the years 1932 to 1934.

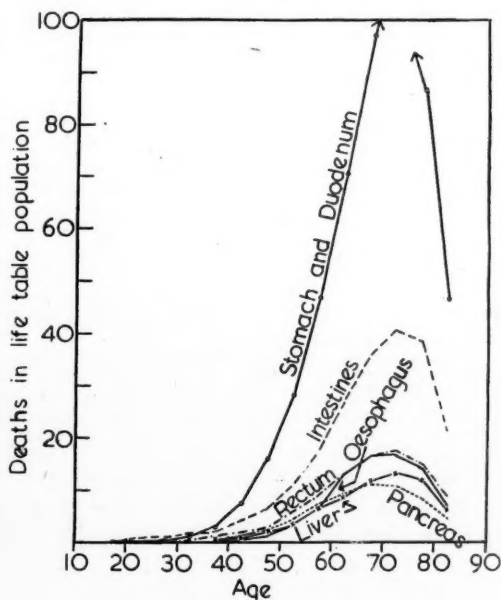


FIGURE IIb.

The deaths by age in the standard population for certain cancers of the male. The standard population is that of the 1933 male life table, and the cancer rates may be taken as based on the same experience, Australia, for the years 1932 to 1934.

Cancer of the prostate is a relatively common tumour, so that the experience over a ten-year period or less is quite adequate for purposes of comparison when the rates

TABLE I.  
The Death Rates from Cancer of the Prostate in Australia.

Age Group. (Years.)	Deaths per Annum per Million.				
	1908 to 1910.	1911 to 1920.	1921 to 1930.	1931 to 1940.	1941 to 1945.
0 to 24 ..	0	0	0	0	0
25 to 34 ..	0	0	1	0	0
35 to 44 ..	2	2	2	4	2
45 to 54 ..	7	12	20	24	21
55 to 64 ..	78	99	164	226	209
65 to 74 ..	198	280	634	1000	1036
75 and over ..	397	508	1193	2146	2420
All ages ..	16	23	56	108	124

are considered. Other peculiarly male cancers are much less common, so that the experience has been pooled in the same way as that of the female cancers, there being

TABLE II.  
The Death Rates in Australia from "Diseases of the Prostate".

Age Group. (Years.)	Deaths per Annum per Million.				
	1908 to 1910.	1911 to 1920.	1921 to 1930.	1931 to 1940.	1941 to 1945.
0 to 24 ..	0	0	0	0	0
25 to 34 ..	0	1	1	1	1
35 to 44 ..	0	1	2	4	3
45 to 54 ..	6	13	15	20	15
55 to 64 ..	129	158	198	207	177
65 to 74 ..	359	902	1076	1131	1161
75 and over ..	2891	3352	3701	4230	4358
All ages ..	72	83	108	150	169

two periods for comparison—namely, 1908 to 1930 and 1931 to 1945. Even this leaves rather small numbers to be compared in Table IV.

TABLE III.  
The Deaths from Cancers of the Male Genital Organs and Cancer (All Forms) by Age and Conjugal State (Australia, 1931 to 1940).

Age Group (Years) and Site.	Never Married.	Married With Children.	Married Without Children.	Total with Conjugal Condition Stated.
<b>Male genital organs:</b>				
25 to 34 <sup>1</sup> ..	19 (21)	26 (32)	16 (8)	61
35 to 44 ..	4 (9)	36 (31)	7 (7)	47
45 to 54 ..	25 (20)	83 (83)	11 (16)	119
55 to 64 ..	37 (98)	474 (458)	83 (88)	644
65 to 74 <sup>1</sup> ..	198 (233)	1152 (1107)	154 (164)	1504
75 and over <sup>1</sup> ..	181 (235)	1426 (1368)	153 (157)	1760
<b>All sites:</b>				
25 to 34 ..	168	251	64	483
35 to 44 ..	238	827	178	1243
45 to 54 ..	631	2575	492	3698
55 to 64 ..	1321	6178	1186	8685
65 to 74 ..	1752	8377	1242	11,371
75 and over ..	1276	7442	857	9575

<sup>1</sup> The  $\chi^2$  test shows that the distribution of conjugal condition of persons dead from cancers of the male genital organs in this age group cannot be considered as homogeneous with that of all other sites.

#### Cancer of the Male Breast.

There has been a reluctance among the statisticians in Australia responsible for the interpretation of the "International List" to admit the existence of cancer of the male breast, or to admit that it should be compared with cancer



TABLE IV.  
The Death Rates from the Cancers Peculiar to the Male in Australia for Two Periods by Age.

Age Group. (Years.)	The Deaths per Million per Annum for Cancers in the Sites Stated.													
	All Forms.		Prostate.		Breast. <sup>1</sup>		Scrotum and Penis.		Testis.		Male Genitals Unspecified. <sup>2</sup>		All Forms Peculiar to the Male.	
	1908 to 1930.	1931 to 1945.	1908 to 1930.	1931 to 1945.	1908 <sup>1</sup> to 1930.	1931 to 1945.	1908 to 1930.	1931 to 1945.	1908 to 1930.	1931 to 1945.	1908 to 1930.	1931 to 1945.	1908 to 1930.	1931 to 1945.
0 to 24 .. ..	29	31	0	0	0	0	0	0	1	1	— <sup>2</sup>	0	1	2
5 to 34 .. ..	91	96	0	0	0	0	0	0	4	9	—	0	5	10
35 to 44 .. ..	338	302	2	3	0	1	3	2	5	8	—	0	9	15
45 to 54 .. ..	1310	1086	15	23	1	2	5	4	4	6	—	1	25	36
55 to 64 .. ..	3725	3336	133	219	1	3	13	13	4	10	—	2	151	247
65 to 74 .. ..	7552	8242	468	1013	4	15	22	31	11	17	—	2	512	1079
75 and over ..	10,809	14,311	834	2252	2	26	65	85	13	31	—	8	915	2402
All ages .. ..	869	1143	38	113	0	2	4	5	3	6	—	1	45	127

<sup>1</sup> No cancer of the male breast was tabulated as such in *Demography* for the years 1921 to 1929 (see text).

<sup>2</sup> The deaths for this column are not available, as they have been pooled in the *Demography* tabulations with certain other cancer deaths.

of the female breast. In the earlier classifications the tumours were not to be found in the same rubric as cancer of the female breast, but among cancers of the skin, as in *Demography*, 1908 to 1910, and 1911 to 1920. In *Demography* cancer of the breast disappears entirely for the years 1921 to 1929 and then reappears in 1930 with five deaths. It can only be assumed that in these years it has been grouped with cancers of "site unspecified" or some other such rubric. From 1931 onwards carcinoma of the breast has been placed in the same rubric as cancer of the female breast, which seems the most desirable position for it. The rates in Table IV, therefore, are only about half of what they should be for the earlier period. A general statement may be made that cancer of the male breast now occurs with a frequency about one one-hundredth of that of the female breast, but adequate data are not available for a consideration of trends.

#### Cancer of the Testis.

Cancer of the testis forms but a small proportion of the deaths from cancer or from all causes. The mortality rates for two periods in Australia are given in Table IV. There appears to have been an increase in the incidence, although the size of the rates either in the earlier years, 1908 to 1930, or in the later, 1931 to 1945, is not great. There tends to be a relative maximum in the rates for both periods around the age of thirty-five years. After this age the rates tend to fall or remain constant and then rise throughout life. This finding is in keeping with the division of testicular tumours by clinical experience (Dew, 1925; Ewing, 1928; Willis, 1949) into the teratomata and the carcinomata, the former occurring at earlier ages than the latter. The rates in Australia appear to be of the same general magnitude as those in England, if comparisons are made of these tables with Table LXXX of the Registrar-General's Report (1949).

#### Cancer of the Penis and Scrotum.

In Table IV are given the death rates for cancer of the penis and scrotum. The rates are lower in Australia for this combination than they are in England and Wales for the deaths from cancer of the penis alone. It is difficult to say whether this reflects any real difference between the experience of the two countries. There are now established some variations between peoples with different social hygiene. Thus Sorsby (1931) points out that Jews and Mohammedans are almost completely immune to cancer of the penis, and that this immunity is not racial, but follows from the custom of circumcision. Whether this is a factor in the difference between England and Australia it is impossible to say, although there seems reason to believe that circumcision is more frequently performed in Australia than in England. Climatic conditions may be of some importance, as they impel a greater frequency of bathing in Australia than in the cooler climates.

#### Unspecified Cancers of the Male Genitalia.

Table IV shows that the deaths certified as due to unspecified cancers of the male genitalia are few and account for less than 1% of male cancer deaths peculiar to the male, and for only about one one-thousandth of the total cancer mortality for males.

#### Summary.

As part of an analysis of the deaths from cancer in Australia, the mortality in Australia from cancers peculiar to the male has been discussed. Cancer of the prostate forms a considerable proportion of all male cancer mortality, the other peculiarly male cancers being of much less frequent occurrence. The deaths from cancer by age for the commoner sites have been given graphically by the use of a life-table population, which removes the arbitrary nature from the age distributions as usually given. An increase in the death rates from cancer of the prostate, testis and penis and scrotum has been noted. Cancer of the prostate is not distributed over the conjugal classes in the same way as all other cancers, for it appears to be commoner in those married with children than in those married without children or those never married.

#### Acknowledgements.

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# TOXOPLASMOSIS: A REVIEW WITH A REPORT OF THREE CASES.

By R. HERTZBERG, F.R.A.C.S.,

Honorary Ophthalmic Surgeon, Royal Alexandra Hospital  
for Children, Sydney; Honorary Ophthalmic Surgeon,  
Saint George Hospital, Sydney.

TOXOPLASMA has been recognized for forty years as a separate genus of protozoa pathogenic to various animals, but it was Wolf *et alii* (1939) who established that the organism was a cause of human disease. Walsh (1950), participating in a symposium on toxoplasmosis, briefly reviewed the subject and mentioned in chronological order the important literary milestones in the history of the disease. Since then Hogan's monograph (1951) has appeared, containing a review of 78 cases and 143 references.

In England cases have been described by Jacoby and Sagarin (1948), by Nutt *et alii* (1949), by Ridley (1949), and by Wyllie and Fisher (1950), while in Australia Robertson (1946) reported two cases in which, although they conformed clinically, the diagnosis was not substantiated by positive serological findings, and Edmunds (1949) described a case confirmed at post-mortem examination.

The organisms are usually crescentic, pointed at one end and rounded at the other, and measure four to seven by two to four microns. The nuclear chromatin occupies about one-third of the parasite, near the rounded end, and stains red to purple with Giemsa stain. The organism divides by binary fission. In tissue sections "pseudocysts", representing aggregates of parasites in a host cell whose nucleus has disappeared, are sometimes seen (editorial, *The Lancet*, 1948). It occurs in Nature in only a limited number of animals, the commonest natural reservoirs being dogs and cats. Toxoplasma can occur in their faeces and urine, and contamination of a person's hands with subsequent transmission of parasites to the mouth can constitute at least one means of infection. In addition to cats and dogs one must also consider sheep, rabbits, guinea-pigs, voles, and possibly squirrels and pigeons as carriers (Sabin, 1950).

The disease in humans is usually regarded as occurring in three forms: the acute infantile form, the subacute infantile form, and the chronic form (Walsh, 1950). In an annotation on toxoplasmosis the disease is described as occurring in five forms: (i) congenital necrotizing encephalitis; (ii) acquired encephalitis in older children; (iii) acute toxoplasmosis with maculopapular rash in adults; (iv) chronic encephalitis in adults; (v) symptomless infection (editorial, *The Lancet*, 1948).

The infantile or congenital toxoplasmic encephalomyelitis may be divided into an acute or subacute phase, in which the clinical manifestations are chiefly residual effects of the infection. Cowen *et alii* (1942) found that the following features might be seen in the early phase: (i) onset at birth or soon after; (ii) hydrocephalus, clinically apparent or demonstrable by air study; (iii) convulsions; (iv) other inconstant neurological signs such as tremors, twitches, spastic contraction of the extremities and evidence of transverse myelitis; (v) bilateral focal choroiditis; (vi) other ocular signs, such as microphthalmus and ocular palsies; (vii) intracerebral calcification, often multiple and bilateral, and involving the cerebral cortex and basal ganglia; (viii) neonatal jaundice, occasionally lasting many weeks; (ix) hepatosplenomegaly, occasionally lasting many months; (x) rarely interstitial pneumonitis; (xi) xanthochromia, moderate round-cell pleocytosis and high protein content of the fluid and the presence of toxoplasma in smears; (xii) occasional anaemia and leucopenia; (xiii) recovery of toxoplasmas from blood and cerebro-spinal fluid by inoculation of mice and rabbits intracerebrally and intraperitoneally; (xiv) demonstration of neutralizing antibodies to toxoplasma in the blood. Of these features the outstanding are chorio-retinitis, intracerebral calcification, convulsions and hydrocephalus. In this phase the child may

die within a few days after birth or within the first few months of life. If the child survives, the picture is modified and characterized by (i) healed or inactive chorio-retinitis, (ii) reduced vision, (iii) strabismus, nystagmus and microphthalmus, (iv) persisting intracerebral calcification, (v) continuance or late appearance of generalized convulsive seizures or *petit mal* attacks, (vi) chronic hydrocephalus, (vii) retardation of speech development, (viii) mental deficiency, usually mild.

In adults central nervous lesions are minimal. In an acute infection the picture is that of an acute infectious disease often with pronounced pulmonary involvement (Walsh, 1950). Pinkerton and Henderson (1941) describe the acute infection as occurring with rigors, fever, respiratory infection and a maculo-papular rash, and in the chronic adult phase the symptoms are mainly related to the central nervous system. Mothers of babies with congenital toxoplasmosis have neutralizing antibodies in their serum and yet show no signs of the disease.

The chief ocular manifestations of congenital toxoplasmosis are nystagmus, deviation of the eyes, microphthalmus, iridocyclitis with synechiae, cataract secondary to uveitis, vitreous opacities, chorio-retinitis, optic atrophy and papilloedema due to hydrocephalus. The nystagmus and ocular deviation may result from poor fixation or involvement of the brain. Microphthalmus may be bilateral and signifies an infection of the fetus at an early stage. Iridocyclitis may occur as a primary lesion or be associated with chorio-retinitis. Optic atrophy may be secondary to chorio-retinitis or to papilloedema and hydrocephalus (Hogan, 1950). Koch *et alii* (1943) enumerate the features of toxoplasmic chorio-retinitis which they regard as a diagnostic aid in the clinical recognition of the disease. In their opinion chorio-retinitis should be looked for in infants and children with a history of convulsions, hydrocephalus, mental retardation, speech difficulties, defective vision or intracerebral calcification first observed in infancy. Although the importance of chorio-retinopathy is not denied, Sabin and Feldman (1949) have shown that it is not possible in the individual case to be certain of the diagnosis on any clinical grounds. They have shown that if chorio-retinopathy is associated with cerebral calcification in infancy the chances are approximately 90% that it is due to toxoplasma; conversely, when chorio-retinopathy is encountered without cerebral calcification in infancy, the chances may be 90% that it is not due to toxoplasma. They suggest that the syndrome of infantile chorio-retinopathy and cerebral damage without cerebral calcification or serological diagnosis of toxoplasmosis may ultimately be associated with a variety of aetiological factors; the available data suggest defective development rather than a destructive, necrotic lesion as the more probable pathological basis.

The radiological findings in the skull are of importance diagnostically; they consist of microcephaly or more often macrocephaly with hydrocephalus, evidence of increased intracranial pressure and intracerebral calcification. These areas of calcification usually measure one to three millimetres in diameter and may occur in all parts of the cerebral cortex and basal ganglia and thalami. In the basal ganglia and thalami the areas of calcification appear as curvilinear streaks. They may be present at birth, and they have been seen to increase in size and number (Walsh, 1950). Although Camp (1948) has demonstrated that pathological non-neoplastic intracranial calcification occurs in a large number of conditions, its presence should always suggest toxoplasmosis.

In spite of the fact that clinical, ophthalmological and radiological findings may point to a diagnosis of toxoplasmosis, the ultimate diagnosis must rest on the demonstration of the parasites and on serological tests. The finding of the protozoon by biopsy or necropsy either directly or after passage through animals makes the diagnosis certain. This had been accomplished in 18 cases up to 1945 (Binkhorst, 1948).

In any suspected case the precise diagnosis can be of special importance in determining the advice that may be given to parents with regard to their expectation of normal children from subsequent pregnancies. An analysis of the

data indicates that subsequent children, born at any time after the toxoplasma-infected child, are normal (Sabin and Feldman, 1949).

The serological diagnosis is made by the use of one or more of the following tests: the rabbit neutralization test, the complement fixation test, the human skin test and the slide neutralization test.

The rabbit neutralization test is used to determine the capacity of human serum to inhibit or modify the skin lesions produced by toxoplasma in the rabbit's skin. Many human beings without a history of toxoplasmosis yielded serum which had the same antitoxoplasmic properties qualitatively and quantitatively as a child with congenital toxoplasmosis or its mother (Sabin, 1950). The test does not permit a differentiation between old and new infections (Hogan, 1951).

The skin test for toxoplasmosis is performed by injecting an antigen prepared from infected mouse peritoneal exudate (Frenkel, 1948). However, Sabin and Feldman (1949) perform the test by preparing the antigen from infected chorio-allantoic membranes of the chick. The test was carried out on 142 residents of Cincinnati whose ages ranged from three months to eighty-one years. The incidence of positive reactions among at least 20 individuals in each age group tested was as follows: birth to four years, nil; five to nine years, 5%; ten to nineteen years, 14%; twenty to twenty-nine years, 20%; thirty to thirty-nine years, 50%; forty to forty-nine years, 65%; fifty to eighty-one years, 65%. They concluded that the test is not useful for diagnosis because a strongly positive result bears no relationship to the titre of antibody, and a negative result is encountered too often in the presence of antibody. The test is useful only for crude population surveys.

The complement fixation test as originally described by Sabin and Warren (1942) has been found to be unreliable; more recently Sabin (1949) has perfected an antigen of such specificity that even serum titres of 1:2 to 1:4 could be regarded as significant. With the use of his antigen, not a single instance was encountered in which a positive response to the complement fixation test was not associated with the presence of neutralizing antibody for toxoplasma. Toxoplasmic neutralizing antibody (dye test or rabbit test) can be present in high or low titre in the absence of complement fixation antibody, indicating that these antibodies appear and disappear at different times after the onset of infection. Complement fixation antibodies can persist for at least six years after infection. A high titre of neutralizing antibody associated with absence of complement fixation antibodies may be indicative of a recently acquired active infection. On the other hand, a low titre of neutralizing antibodies with absence of complement fixation antibodies would be indicative of a "subsided" toxoplasmic infection of many years' duration. In most instances of congenital toxoplasmosis, especially during the first six years of life, the complement fixation test in the serum of the child and mother by itself provides the serological confirmation of the diagnosis.

The dye test or slide neutralization test provides the most sensitive and quantitative means for measuring toxoplasma neutralizing antibodies, and together with the complement fixation test yields the most precise information which can be obtained (Sabin and Feldman, 1949). The test developed by Sabin and Feldman (1948) depends on the discovery that the cytoplasm of the toxoplasma loses its affinity for methylene blue and certain other basic dyes after it has combined with specific antibody, which is heat-stable and has been acted on by heat-labile, non-specific accessory factor present in small amounts in human serum. Hogan (1951) equates the reaction as in Figure I.

The dye test titre refers to the highest original dilution of a serum which, in the presence of a constant amount of accessory factor, is capable of depriving cytoplasm of 50% of the toxoplasma of its affinity for methylene blue at pH 11.0. In experimental animals the dye test antibody appears within three to five days after infection and reaches peak titres of 1:1000 to 1:4000 in ten to twenty-one days.

The same titres occur in both clinically apparent and inapparent toxoplasma infection in human beings, and can persist at this high level for at least two to five years. From a serological study of 60 children and their mothers Sabin and Feldman (1949) were able to conclude that there appears to be no justification for considering the diagnosis of toxoplasmosis in the absence of conclusive serological findings. The assumption that the neutralizing or dye test antibodies may disappear quickly in some individuals, or that infants may be slow in developing their own upon losing the placentally transmitted maternal antibody, is without valid evidence and therefore untenable.

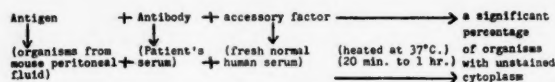


FIGURE I.

In respect to therapy, many therapeutic agents have been tried in experimental animals. Sabin (1950) has found that sulphonamides exert some effect in experimental animals. However, he expresses the opinion that there is no point in administering sulphonamides to an infant with congenital toxoplasmosis, as the damage has already been done. However, if the obstetrician finds a pregnant woman who has a high titre of dye test antibody and no complement fixing antibody, there is a good possibility that she is undergoing an acute infection with this organism; in such a case there is an indication to give sulphonamides in the hope of preventing congenital toxoplasmosis. Hogan (1951) has shown that in experimental animals the infection was not influenced by a wide range of antibiotics, including aureomycin, streptomycin, "Chloromycetin" and emetine hydrochloride.

Warren and Sabin (1942) found that "Atebrin", "Optochin", "Mapharsen", "Neosalvarsan", trypanamide and quinine hydrochloride were capable of killing toxoplasma *in vitro* to a varying degree, but none of these drugs was effective *in vivo* when tested in mice or rabbits. Sjögren (1950) claims to have cured acute toxoplasmotic chorio-retinitis in a patient aged twenty-three years with fifteen tablets of atep ("Atebrin" and "Plasmochin"). Although this patient had intracerebral calcification and macula coloboma in the other eye and gave a positive response to the toxoplasmotic neutralization test, Sabin (1950) has stated that in his opinion there is at the present time no evidence that chorio-retinitis can be a manifestation of toxoplasmic infection occurring at any time after birth of the subject. Also there is no evidence that healed chorio-retinitis in a patient with an arrested congenital toxoplasmic infection can light up and become acute chorio-retinitis.

#### Reports of Cases.

CASE I.—L.S., a female patient, now aged seven years, was first examined at the Royal Alexandra Hospital for Children when four months old, at which time it was noted that she had a coloboma of the right macula and a microphthalmic left eye. When she was examined in June, 1951, there were searching nystagmoid movements of both eyes. The left eye, which was microphthalmic, was also convergent. The left pupil was small and failed to dilate, and posterior synechiae were present in it. The right pupil dilated with a mydriatic, and a coloboma of the macula was found. The appearance of the coloboma of the right eye and the microphthalmic left eye suggested toxoplasmosis. An X-ray film of the skull revealed intracerebral calcification in the basal ganglia area, the calcified area being curvilinear in shape. Examination of the cerebro-spinal fluid revealed no abnormality. The serum of the patient and of her mother was examined for toxoplasmic antibodies by Dr. Harry Feldman, of Syracuse, New York, who reported as follows:

The sera of both Mrs. S. and her daughter, L.S., contain antibodies for toxoplasma in a titre of 1:64. A titre of 1:64 is somewhat lower than what we like to see, but in view of the fact that L.S. is now 7 years this result can be considered reasonable. Certainly the fact that both mother and child have the same titre offers serological support to the clinical diagnosis.

CASE II.—E.A., a male patient, was the sixth child of healthy parents; all previous pregnancies and the pregnancy



which produced this patient had been normal. The child was first examined when three weeks old. At birth it was noticed that the left eye was very small.

Examination under anaesthesia revealed the following findings. In the right eye, the corneal diameter was nine millimetres. The anterior chamber was shallow, there was a pupillary membrane and details of the fundus could not be made out. In the left eye, the corneal diameter was seven millimetres. The pupil reacted poorly to a mydriatic, and there was a mass behind the lens. Hydrocephalus was present, with gross separation of the cranial sutures and enlargement of both fontanelles.

The child was admitted to the Royal Alexandra Hospital on October 3, 1951, with a provisional diagnosis of toxoplasmic encephalomyelitis. Lumbar puncture on October 4, 1951, revealed xanthochromic fluid which clotted on standing. The total protein content was 500 milligrammes per centum. On October 10, 1951, the cerebro-spinal fluid obtained by ventricular tap was xanthochromic and the protein content was 900 milligrammes per centum; the fluid obtained by lumbar puncture on October 15 had a total protein content of 1800 milligrammes per centum.

X-ray examination of the skull revealed no intracerebral calcification. The liver and spleen were palpable. A full blood count on October 4, 1951, revealed an eosinophilia of 11%. Sera was obtained from both mother and child and sent to Dr. H. Feldman, who reported as follows:

The serum of Mrs. A. contains antibodies for toxoplasma in a titre of 1:1024. The specimen for E.A. is also positive in a titre of 1:1024. Of course a baby at this age would have passively transferred antibodies to the same extent as his mother's serum contains them. However, the clinical story is very strongly suggestive of active congenital toxoplasmosis.

The child died on November 9, 1951, aged nine weeks. Relevant post-mortem findings were as follows:

The bones of the cranial vault were thinned and the sutures separated. There was evidence of old haemorrhage in both middle cranial fossae, each containing a rust-coloured membrane.

The brain was hydrocephalic. The meninges forming the basal cisterns were not thickened and the *cisterna magna* was not distended. When the brain was removed from the cranium, the pia-arachnoid overlying the cerebral hemispheres was seen to be thickened and gelatinous. No evidence of meningitis was demonstrated at the base of the brain.

The cerebral cortex was thin generally. The gyri of the temporal lobes and of both cerebral hemispheres anteriorly from the post-central gyri were flattened but distinguishable. Posteriorly, however, the cortex on both sides was reduced to a semi-transparent membrane. On the inferior aspect of the latter were several opaque areas, yellowish-white in colour, but not obviously calcified.

When sections of the brain were cut, both lateral ventricles were extremely dilated and contained clear, yellow fluid which clotted immediately on removal. The ventricle wall was smooth and white and no exudate or deposit was demonstrated. The third ventricle and interventricular foramina and the aqueduct of Sylvius were completely obliterated with whitish fibrinous material. The fourth ventricle was not dilated and the foramina of Magendie and Luschka were not obstructed.

Inspection of the cut surface of the cortex did not disclose any additional features of note, but section through the basal ganglia revealed an area which was firm, yellowish in colour and of indefinite outline, surrounded by a reddish area of softening.

The left eye measured 1.3 centimetres in the antero-posterior diameter. On section after fixation the vitreous body was replaced by dark red coagulum.

The right eye measured 1.7 centimetres in the antero-posterior diameter. Section showed the vitreous body of this eye to be abnormal also; it was composed of white opaque material.

The liver was congested but not enlarged (weight 210 grammes). Two tiny, yellowish areas (approximately one millimetre by one millimetre) were present on the anterior surface of the liver. No other changes were demonstrated externally or on section.

The spleen was enlarged (weight 57 grammes) and was firm in consistency. The cut surface was normal. Histological examination gave the following information. The kidney was normal apart from some haematopoietic foci. A pseudocapsule containing toxoplasma was present in one capsular space.

The left eye was much reduced in size. The retina was not defined, but a band of cellular tissue containing retinal elements stretched across the posterior chamber and within

the substance of this tissue and between it and the lens were scattered a small number of plasma cells. The sclera was unduly thick and dense and was separated from the choroid, especially anteriorly, by edematous tissue containing an abundance of haematopoietic cells. No toxoplasma organisms were found within the eye or in the periorbital tissues.

In the right eye all coats were normally developed. There was a persistent hyaloid artery, and the posterior chamber was occupied by a fibrinous type of coagulum. Peripheral lens fibres were vacuolated and there were some calcific deposits situated more centrally.

Severe and extensive necrotic and inflammatory damage was present in sections taken from various regions of the cerebrum. The general picture was one of subacute inflammation with fibrous and cellular thickening of the meninges, and softening with pronounced secondary glial proliferation in the cerebral substance approaching complete disappearance of all cerebral tissue in some parts and its replacement by a thin glial membrane. Calcification was quite a feature in the damaged tissue, the location being mainly in the outer layers of the cortex. In addition to these diffuse destructive lesions there were also present isolated productive lesions taking the form of small granulomata, best seen in the less severely damaged portions. Toxoplasma organisms were visible throughout the damaged tissue, both singly and in small clusters surrounded by a pseudo-capsule. Lesions were also present in the cerebellum and throughout the entire length of the spinal cord, principally in the form of granulomata.

CASE III.—L.H., a female baby, was admitted to the Royal Alexandra Hospital for Children when seven weeks old with a provisional diagnosis of congenital obliteration of the bile ducts. The pregnancy was normal, as was the confinement, and the birth weight was six pounds three ounces. Four days after birth the child became slightly jaundiced. It was noted that the fontanelles were large and the cranial sutures were open. The liver was palpable. Both eyes were microphthalmic.

Examination under general anaesthesia revealed bilateral microphthalmos, the pupils responding poorly to mydriatics. In the right eye there were remnants of a pupillary membrane. There was a red reflex, but fundus details could not be made. There was no red reflex in the left eye and there was a mass behind the lens.

An X-ray examination of the skull revealed widening of the sutures and large fan-like areas of calcification in both sides of the brain anterior to and above the pituitary.

A lumbar puncture produced xanthochromic fluid, the protein content being 640 milligrammes per centum and the chloride content 1000 milligrammes per centum. A blood count revealed moderate anaemia and an increase in the number of eosinophile cells amounting to 8%.

Specimens of the patient's and of the mother's serum were sent to Dr. Harry Feldman for examination. He reported as follows:

The serum of L.H. contains antibodies for toxoplasma in a titre of 1:4096. The mother's serum is positive in a titre of 1:1024. A titre of this magnitude in a baby of 12 weeks is explainable only on a basis of an actual infection and does not represent passively transferred antibody.

The child died when fourteen weeks old.

#### Summary.

1. The literature of toxoplasmosis is briefly reviewed.
2. Three cases, all with positive serological findings, and one with positive post-mortem findings are presented.
3. The disease is probably more prevalent than has hitherto been thought.

#### Acknowledgement.

I desire to thank Dr. G. Geikie for allowing me to use the clinical notes of the third case reported. My thanks are also due to Dr. D. Reye, Director of Pathology at the Royal Alexandra Hospital for Children, and his staff for collecting and dispatching serum to Dr. Feldman, of New York, and for the post-mortem report in Case II.

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### SOME IMPRESSIONS OF GROUP PSYCHOTHERAPY.<sup>1</sup>

By FRANCIS W. GRAHAM, M.B., B.S., D.P.M.,  
Honorary Assistant Psychiatrist, Royal Melbourne  
Hospital; Director, Melbourne Clinic for  
Psychoanalysis, Melbourne.

THE treatment of patients in groups has been practised in one way or another for many years. But until comparatively recently it has been unorganized and largely dependent on the activities of a few scattered individuals who had little or no contact with each other. The interest of the medical profession was slow to develop. It took the second World War to focus more interest on this subject. This was due partly to the shortage of therapists in relation to the great number of patients who required treatment, and partly to a quickened interest in group tensions and group problems generally. These last-mentioned were of

obvious importance as they were closely linked with the ever-present problem of morale. Since the war there has been much greater interest shown in group therapy than ever before. In both the United States of America and England there is much activity in this direction, and research is gradually becoming more organized. Various schools of thought are applying their principles and theories to group problems. It is, however, far too early to expect much in the way of general rules of procedure to have crystallized out.

As far as Australia is concerned the late Dr. Paul Dane was the first to introduce group therapy on his return from the United States of America in 1949. He started this form of treatment at the Melbourne Institute for Psychoanalysis and in the Repatriation Department, where some of the psychiatrists are still carrying it on.

My own experience in this therapy extends over a period of about two and a half years, at the Royal Melbourne Hospital and in private practice. I was led to try it partly by some interesting results that Dr. Dane claimed and partly by the idea of its possibilities in dealing with the large numbers of patients who pass through general hospital psychiatry departments.

Group therapy may be divided roughly into three types:

- (i) Activity group therapy, which is used chiefly with children and in which, as the name suggests, activity is encouraged.
- (ii) Repressive-inspirational types; as an example of this Alcoholics Anonymous is sometimes quoted.
- (iii) Analytical group therapy, sometimes called group-analytic therapy; in this form the aims are similar to those of psychoanalysis—that is, an attempt is made to help the patient to a greater awareness of his unconscious mental processes.

I should like to point out that my group therapy experience is solely confined to this third type. Coming to the subject with the training of a psychoanalyst and convinced of the importance of the unconscious in the causation of psychoneurotic symptoms, I have tried to make my group therapy as much like psychoanalysis as possible. As regards the first two forms of group therapy, I have nothing to say, as my experience of them is nil.

The patients selected have been for the most part subjects of psychoneurosis between the ages of twenty and thirty-five years. There have been a few with psychosomatic conditions—for example, men with chronic gastric disturbance, one suffering from anxiety hysteria with longstanding rheumatic carditis. There was one latent homosexual and one exhibitionist. The size of groups has varied from two to seven. Some groups have been male, others female, and one a mixed group. Frequency of sessions has been three to four times per month for some, twice per week for others.

For various reasons it has been impossible to give any of these patients sufficiently consistent treatment for me to come to any reliable conclusion as to the ultimate efficacy of the method. However, it has been possible to make sufficient observations to gain some interesting impressions which may guide us in further work, or in planning some more systematic research.

A certain type of public hospital patient, who has been coming along regularly to the out-patient department for years, is somewhat taken aback at the suggestion of group therapy. He has come to be so much at home with his neurosis, his secondary gains are so well established, that group treatment offers a positive threat to his peace of mind. Such patients may sit glum and sullen throughout the first session, not saying a word, and never turn up at the hospital again. These patients can usually be found in other hospital clinics.

But one should not always be disappointed if a patient runs away from treatment. It may be the best means he has at his disposal for dealing with his unconscious anxiety. I have in mind a case of anxiety in a young man of thirty-two years. He had severe rheumatic carditis about ten years before, which had left him with valvular disease, though compensation was good. He became hypersensitive, irritable and demanding, had anxiety attacks, remained in bed, and made life almost unbearable for his parents. This

<sup>1</sup>Read at a meeting of the Australasian Association of Psychiatrists, Sydney, October 29 to November 2, 1951.

state of affairs continued for many years. He had been admitted to the Royal Melbourne Hospital on two occasions and each time was soon up and about and free from symptoms. However, as soon as he returned home he rapidly became as bad as ever. It was decided to try him in the group. He came along several times in a wheel chair, brought by his father. He talked a little, mainly to complain, and looked exceedingly ill-tempered and sullen. At this stage I had only just begun group treatment and was feeling my way. Interpretations of unconscious material were not yet a feature of the sessions. Nevertheless, I feel that even this quiet beginning stirred this patient's anxiety so much as to have a very definite bearing on an attack of severe cardiac failure he suffered at this time. Here was a man who had a damaged cardiac system, although compensation had been more than adequate for very many years. He was unable to cope with the somatic effects of increased anxiety. He was almost certainly pressed to accept treatment by his exasperated family—which of course would help to increase his hostility and anxiety. If he had been allowed to avoid treatment I am sure that his cardiac compensation would not have broken down.

The implications of this case are obvious—when there is an organic defect likely to endanger life and when this defect is likely to be adversely affected by anxiety, then the greatest caution is necessary. Careful medical supervision is called for and sometimes psychological treatment should be undertaken only if the subjects are in-patients. The danger here described is, of course, not confined to group psychotherapy. The same thing applies to any form of psychological treatment when anxiety is likely to be stirred even though only transiently. It is also a pointer to the dangers of lay psychotherapists attempting to deal with psychosomatic problems.

There is another type of case which seems to be a contraindication for group therapy—at least of the analytical variety—and that is a schizoid state (I have no experience of treating frank schizophrenics with group methods). One psychoneurotic who was described as having schizoid traits on psychometric tests came regularly for a few months. Some of his associations and dreams had, I felt, a psychotic flavour, and I was glad to see him drop out voluntarily at the Christmas break. Six months later I had from him a confused, very psychotic letter, in which I was very much the arch-persecutor. I expected to see a few days later a very deteriorated schizophrenic and was surprised to see him turn up tidy and well dressed. He showed good insight and said that the letter was all nonsense, but that he had just felt that way a few days before.

This case is complicated by the fact that the patient's mother was severely epileptic, and he may have suffered an epileptic equivalent which might account for a transient confusional state. Another psychiatrist, shortly after this, gave him a course of electroconvulsive therapy, during which he became uncontrollable and had to be admitted to a receiving house. It is hardly possible, in this case, to draw very definite conclusions as regards the relationship between group therapy and the patient's final state, but I think that there are sufficient indications to make one rather wary about taking schizoid types for group analytic therapy. The contraindications emphasize the necessity for a thorough investigation, both physical and psychological, before group therapy is even contemplated. The Rorschach and other psychometric tests are helpful in doubtful cases. These tests often reveal hidden psychotic traits.

The picture is much brighter when it comes to treating psychoneurotics. Anxiety hysterics seem to do well. I have had only two typical obsessional neurotics in group treatment. One ceased to come after a few sessions; the other is showing good progress after a few months.

A few words about technique. We sit informally in a rough circle and introduce the members to each other. Theoretical explanation and discussion are kept to a minimum. They are told that they are free to discuss anything they like and that treatment consists mainly in this freedom of discussion. There is no need to bring in

the notions of conscious or unconscious at this stage. This would tend to give a much too intellectual turn to the proceedings. The members of the group are not told that they must say everything that comes to their mind, but they are given to understand that the more they discuss their thoughts and feelings, the better their treatment is likely to proceed.

The therapist's attention should always be keenly directed towards resistance in every shape and form—that is, to those forces which tend to prevent the free expression of thought and feeling. Silence is a common form of resistance, and when it is general the group's attention should be directed to it; so that the first step is to direct attention to the resistance and the second is to analyse it. Quite often the former is alone sufficient to bring out feelings of embarrassment, and this leads readily to the expression of fears of what the therapist or other group members may think. The content of what is embarrassing then tends to follow. My present policy is to ignore the silent member indefinitely, but I am not sure that this is the best course. In some groups there may be a patient who will never allow a silence. He cannot bear it and will immediately start talking at the mere threat of a lag in conversation. He can be allowed to continue to see what effect he has on the rest of the group. It may start something. If, however, the group meekly submits to his aggression and looks like doing so indefinitely, then it is time to unmask his anxiety and his way of defending himself against it.

The therapist should keep a strict eye on the transference situation. It is more complex, as might be expected, in groups and so tends to be more difficult to handle than in individual therapy. It should be borne in mind that any subject of discussion may relate directly or indirectly, consciously or unconsciously, to the therapist. No opportunity should be lost of showing the relationship of the material, and of various attitudes, to the therapist. For instance, to take a simple illustration, if the therapist has arrived late and somewhere in the session the group starts talking about girl friends who keep them waiting, or employers who turn up at any old time although insisting that their employees be punctual, then the group's hostile reaction to the therapist's being late must be pointed out. This is what some group therapists like to emphasize as analysing the "here and now" situation. I feel that this is sometimes over-emphasized, and that if the "here and now" leads on to the "not-here and past" then this further material should be analysed in its relation to the past. Thus there are two important processes here: firstly, the relating of material to the present transference situation, and secondly, the relating of this latter to the significant past. The two processes should go hand in hand.

The negative transference has an important manifestation which, if not analysed, may prove disruptive to the group. Sometimes group members become very irritable with each other and heated arguments may develop over apparently unimportant points. The therapist is apparently left out of it. This is nearly always due to the displacement of group hostility from the therapist to the less feared group members. Its early recognition and analysis are obviously important.

There is some discussion about whether we analyse groups or the individuals in groups. If we take "analyse" to mean "make conscious what was previously unconscious" then we can analyse only individuals and not groups. If some unconscious impulse common to the group members has become conscious, then we can perhaps talk of analysing the group. But the important fact is that the individuals in the group have become conscious of something that formerly they were unaware of. This is not a mere quibble. It is closely related to another important problem in group analytic therapy.

Some therapists maintain that material should be analysed only if it is part of the common denominator of the group. By this I take it they mean that unconscious impulses or tendencies should be interpreted only if they are shared by the group generally. Most of our work turns out to be just this, but in my experience I have seen



nothing but good come of pursuing the analysis of an individual who breaks away from the common denominator. The therapist must, however, recognize and analyse all the factors involved here; for example, the patient is separating off from the group to try to seduce him, and there is his rivalry and jealousy towards the other members. When the therapist pays attention to this would-be seducer, the others unconsciously interpret it as an erotic relationship and react with anger and jealousy toward both patient and therapist. All this must be interpreted.

This common denominator is based upon mutual identification between the group members and results in guilt-sharing, which reduces individual guilt. It is therefore a defence mechanism which needs analysing.

The groups with which I have had experience are what we call continuous groups; that is, new members are added from time to time.

The problem of the new member is a very real one. I have seen many patients whom one would deem suitable for group therapy who turned up once but never again. This is due largely to the atmosphere of hostility against a newcomer. If the group is working well and able to express freely its hostility, this is all the greater shock to the newcomer. It raises the question of whether the newcomer should not undergo some form of preparation before entering a group or whether all analytical groups should not be closed groups.

The theory of groups is of course in its infancy. Some therapists seem to me to be straining too much to develop new concepts with which to work in groups. The concepts we have already at our disposal should be thoroughly exploited, and if they are found inadequate then it is time to develop alternatives. My short experience leads me to the opinion that the psychoanalytical concepts developed by Freud are quite adequate to deal with the phenomena of group therapy. Some of the more important ones are as follows: libido, destrudo (or aggression), projection, transference, superego, ego, repression. It should be remembered that these groups are formed solely for the purpose of treatment of the individuals that comprise the group. It may well be different when it comes to studying the stable complex groups that are characteristic of society. Our concepts may have to be considerably elaborated to do justice to these.

As I shall try to show in a few concluding examples, it is possible to do analytical work in groups that satisfies the criteria of psychoanalysis—namely, the overcoming of repression with recovery of memories and their appropriate emotional tone, the obtaining of confirmatory material following correct interpretations, the alleviation of symptoms, and the reduction of anxiety and guilt—the chief changes coming about by analysis of transference and working through. In these examples I shall make no attempt to give the whole content of any one session but shall make selections of material to try to demonstrate how it was dealt with—the sort of interpretations that were made, and the outcome.

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Let us now amble into the larger realm of sociology. The older members of our psychiatric fraternity have seen immense changes within their lifetime.

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One could cite also the large and the petty dodgers of income tax, the aspirants to pensions who conceal their riches, the "certificate" seekers who are everywhere.

As a finale one might mention the extraordinary spectacle of a nation-wide compulsory forty-hour week for pampered city dwellers, whilst the depleted ranks of the men on the land, the backbone of our existence, must of necessity work fifty, sixty or even more hours, and under difficult conditions.

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It is indeed an apt illustration of our theme. The end-results of change are unexpected and often far distant from and contrary to the original intention. Our enthusiasm for unionism was due to its humanity and its passionate desire to help the worker in his fight for reasonable conditions. It has ended in just another political machine, using political methods for vote-catching and party security.

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The foregoing outlines certain recurring and inherent tendencies in human behaviour. Customs and goals change from time to time, often in an unpredictable manner. We support an ideal only to find at the end of a lifetime of work that it is transmuted into something which we had never intended. So-called progress is by no means always good. Often it is a step in the wrong direction. I have no doubt that each one of us, though actuated by the loftiest motives, has in the past made decisions which future events showed to be entirely wrong.

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How can we pilot our course in this dark and often stormy scene of confusion? As psychiatrists we wish to keep our psychiatric barque on an even keel. Our objectives must be reasonably fixed. If a man wishes to embark on the practice of our specialty he must know the qualifications necessary to his calling. Obviously the knowledge required for detailed treatment will vary with the progress of science, but there may be certain principles which are unchangeable and eternal. Can we find eternal truth amid this welter of confusion? Can we avoid the backlash of change?

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nothing but good come of pursuing the analysis of an individual who breaks away from the common denominator. The therapist must, however, recognize and analyse all the factors involved here; for example, the patient is separating off from the group to try to seduce him, and there is his rivalry and jealousy towards the other members. When the therapist pays attention to this would-be seducer, the others unconsciously interpret it as an erotic relationship and react with anger and jealousy toward both patient and therapist. All this must be interpreted.

This common denominator is based upon mutual identification between the group members and results in guilt-sharing, which reduces individual guilt. It is therefore a defence mechanism which needs analysing.

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My observations are based on the literature extant between 1837 and 1850. It is sufficient to pinpoint the chief qualities which are, and always will be necessary for a psychiatrist. That they showed themselves in the lives of Mr. Digby and Dr. Campbell is most fortunate, since already we as Australian psychiatrists have a century of tradition.

It is hardly necessary to remind those versed in the intricacies of psychology that tradition has many virtues. Not merely is it a storehouse of knowledge; it is an urge to action. It is timeless and endures from generation to generation. It can defy death and lead men and women into the utmost heights of courage.

Furthermore, it is capable of symbolic representation, and this can be used as a perpetual reminder of the tradition which it symbolizes.

The tradition of Tarban Creek centres around the words "administration", "humanity", "enthusiasm", "knowledge", "balance" and "perseverance". No word has any priority, but rather they are the spokes of a wheel in which each has an integral and moving function.

#### Administration.

It cannot be denied that Mr. Digby had administrative ability. With the minimum of help and often the direct opposition of his superiors he succeeded in creating an asylum which compared favourably with many in England. This was achieved in an outpost of the Empire and in a situation at a distance from the main centre of Sydney.

Whilst at first thought administrative ability is necessary only for those in institutions, reflection shows that it is an essential for all psychiatrists and has a wide application.

The ability to administer implies tact in interpersonal relationships.

As the extramural practitioner sits in his consulting room he must bring to his patient not merely knowledge of himself but also an active participation in the lives of his family and the outside world. The psychiatrist must tactfully advise as to jobs, holidays, meetings, friends and enemies. He is an administrator to the patient, and his task differs only in detail from that of his intramural brother. He lacks the help of attendants and nurses, but as one who has been both intramural and extramural, with likings for each, I believe that the tasks of the outside consultant often need a high degree of administrative ability in view of the intangible difficulties set by an intangible environment.

The quality covers such essentials as the timing of future events, the keeping of relevant records, and the maintaining of orderliness of method, all of which are essential to good work.

Furthermore, administrative ability requires a degree of self-discipline. If one cannot discipline self the task of influencing others is hopeless. Many a budding psychiatrist has been impaled on the horns of this dilemma and with dire effects. Of all the specialties, psychiatry imposes on its disciples the greatest need for personal stability.

Looking through the records I have the greatest admiration for this quality in Mr. Digby. Of him could be said: "I am master of my soul."

#### Humanity.

March 24, 1841, records a milestone in psychiatry. A free woman, Catherine Healey, returned voluntarily to the asylum. Mr. Digby arranged that she be admitted. In the same year he found that the female lunatics were unexpectedly increasing, so immediately approached Governor Gipps with plans for increased accommodation. His request was refused, but instead of accepting higher authority with complacency he went through the estimates and on the earliest occasion put through a further request for at least a half of his original estimate. His further brusque rebuttal was merely the preliminary to further requests.

The year 1842 is noteworthy for concise rules concerning the care of patients; for example:

In every case of illness a report to be made immediately to the Surgeon and likewise to the Superintendent.

All Medicines to be duly and regularly administered, and particular attention to be paid to all orders from the Surgeon respecting the Medical Treatment of the Patients, to report the state of their bowels, or any sudden change that may take place in their health, and that the slightest appearance of any sore to be reported both to the Surgeon and the Superintendent.

No confinements to be put upon any of the Patients without acquainting the Superintendent, before or immediately afterwards, and no confinements to be taken off without first obtaining his Authority.

It is recorded that in cold weather good fires must be constantly kept in the patients' messrooms.

Later Mr. Digby asks for leave to enclose two acres for pleasure grounds for patients as "such a garden would afford the convalescent and tranquil cases more air, exercise and employment, together with a pleasant view of the river and the surrounding country from which they are shut out in their present enclosed, though for many cases, useful airing grounds, and would also afford me a better opportunity and greater facilities for classification".

The above extracts could be multiplied; they indicate the humanity of Mr. Digby. This quality may be termed the kindly feeling towards fellow men and women or the spirit of benevolence and tenderness. Without a feeling of kindness to humanity, and of love, in the sense of *ἀγάπη*, the course of the psychiatrist is a bleak waste of troubled waters. His soul is weary, and his patients are unsatisfied. It is probable that the mother and father roles for the practising psychiatrist are fundamental in therapy. He is thwarted without that pleasant upsurge of parental emotion which soothes out difficulties and gives a feeling of security to those who need his help.

#### Knowledge.

The case books of Dr. Campbell reveal, not merely a mind keenly alive to observation, but also one who is aware of the mental literature of his time. Added to this is a clarity of expression which places his remarks in the realm of medical literature.

Almost every page could be quoted as an apt example. The case of Catherine Handley, aged forty-five years, reveals the chronic cyclic manic-depressive.

This woman has been a resident of this Asylum since June, 1844; she was admitted for melancholia. Her malady does not appear from the reports of her case to have assumed the slightest improvement. Her melancholy undergoes a sort of regular oscillation between the extremes of despair with a tendency to suicide, and morbid hope, when she becomes cheerful, active, troublesome, and even mischievous with exuberance of joy. Her heart appears to be breaking from an accumulation of morbid sorrow, and she gives herself entirely to the deepest despondency.

As a gem of apt description may be again mentioned the microcephalic, George Williamson:

His head is the smallest and most idiotic, so to speak, that has ever come under my observation in an intercourse with the society of various nations during more than forty years. And what is more remarkable still, especially in a psychological point of view, the scalp is far too large for the cranium, so that it is in some measure puckered around the skull forming sulci descending from the vertex to the periphery, in the manner of a folded umbrella. The bottom of these furrows appears to form points or rather lines of attachment to the bone and when the hair is long it stands up curiously in all directions, as on the back of an angry cat. The circumference of the head, as a hatter would apply the line, measures 17 inches.

Can it be denied that knowledge based on tuition and clinical observation is indispensable to every psychiatrist? He deals with the most difficult human material. As he carries out a consultation he must not merely be aware of the contents of his patient's mind, but have a clear appreciation of his future possibilities amid the vagaries and complexities of interpersonal relationships.

The surgeon or physician can focus his attention on an organ. The psychiatrist must study an intangible mind in an intangible environment. Withal he must be careful to make no mistakes, since they destroy the delicate patient-doctor relationship, which is the kernel of all psychiatric treatment.

Such knowledge cannot be acquired overnight. There is a long apprenticeship which entails residence in a mental institution. The founders of the Australasian Association of Psychiatrists were so aware of the difficulties that they insisted on five years' experience before they granted the privileges of membership. It might be said that this is too long, but at least their insistence highlights the need for knowledge.

A tiro could not have written the case notes of Dr. Campbell. He, too, pinpoints the same basic requirement.

#### *Perseverance.*

From the reading and rereading of the notes which led to the publication of "The Dawn of Australian Psychiatry", there has emerged a clear picture of Mr. Digby. Not the least of his many excellent qualities is that of perseverance. His goal was the welfare of the unfortunates under his care. We see him persisting in his efforts to provide amenities. He is rebuffed. He asks again and yet again. Even when close to the end of his career as superintendent and beset by the ordeal of public inquiries, he continues to press his claims.

Mr. Digby personifies perseverance, and surely it is an essential for a psychiatrist.

The "doctor of organs" is accustomed to the recent onset of many diseases. On the contrary the psychiatrist finds that he must often consider disorders commencing in the actual seed of life itself or at least in the distant periods of infancy. He specializes in totality, a lifetime of engrams, tersely described as personality. The ramifications of personality trends are endless and complex.

The "doctor of mind" must assess his facts and create a flimsy scaffold of reality. Often it is broken down and as often repaired. All too frequently he must in his own person become a prop to sanity, available through the years. His work may be endless. Truly there is need for an abundance of perseverance.

The case notes of Dr. Campbell give an admirable account of extremely difficult patients, capable of exacting the last straw of perseverance from the psychiatrist. There is Edwin Augustus Withers, of whom he writes:

This extraordinary man has for a considerable time past proved a pest and a peace destroyer of the little society of which he is a member. He is hated by everyone in the convalescent ward, he is an undoubted hindrance to the recovery of several of the patients of whom I was beginning to entertain hopes. His interference with everything and everybody is intolerable.

Dr. Campbell also stresses the difficulty of making a diagnosis in borderline states. He says of John Byrne:

The character of this patient's malady is manifesting itself by degrees, every day; he is remarkably cunning in concealing the type of his insanity, but he is decidedly insane; he talks incoherently and has delusions.

Every psychiatrist will have his quota of such cases. They are inevitable "chips on the shoulder" to be borne with perseverance.

#### *Enthusiasm.*

The fabric of the Digby-Campbell saga is shot with enthusiasm. There is no hint of apathy or complacency. Busy Mr. Digby might to all appearances have a treasure trove of rare jewels, instead of a motley crew of insane persons. He has his mind forever on the creation of amenities, structural alterations or changes in staff, calculated to improve the asylum. His roving eye seeks for improvement in all departments as instanced in the surgery:

I very respectfully beg leave to submit to His Excellency that shelves in the surgery, on which to place bottles, phials and medicines, so as to be got at in an instant on particular emergencies, cannot but be abso-

lutely necessary, in place of perhaps turning out on the floor the whole contents of the Medicine Chest and other boxes, when in search of any requisite article. I have further the honour to submit that a table is indispensable not only for spreading Blisters, Plasters, compounding Medicines, writing monthly returns of about 2½ feet long by about 2 feet broad, and taking down cases in my Register.

We find him going backwards and forwards in quest of furniture. He writes three-page letters on the merits of straw in beds. There is hardly a page of our records but instances his intense interest.

The zeal of Dr. Campbell is equally obvious. He sees Tarban Creek as an institution with a higher recovery rate than the famous asylums of the Old Country. At a time when the abolition of mechanical restraints was a major problem in the psychiatric world, he devotes all his energies to bring this about. In the interests of the patients he has the zeal of a crusader.

Are we not justified in placing enthusiasm among the essential virtues for a psychiatrist? It lightens the weight of our daily chores, it spurs us to greater efforts and withal is an essential ingredient of successful treatment. The moment a man loses his enthusiasm he slips from the pinnacle of therapeutic efficiency.

Enthusiasm is infectious and is transmitted from doctor to patient with instantaneous rapidity. It can transmute the dross of depression into the gold of euphoria. As a creator of miracles it holds high place in every conceivable form of therapy.

As the young man turns his attention to the distant and difficult fields of psychiatry as a career, he should ask many questions. Among them, if not indeed foremost in his thoughts, should be his capacity for enthusiasm. Without it he faces an endless vista of disappointing hopes.

#### *Balance.*

One aspect of my good friend, Mr. Digby, which has impressed me through the years is that he exhibits balance, not merely when times are good but also in adversity. He has an orderly manner of facing the difficulties of everyday living.

Mr. Digby is pilloried in the Press; he is hauled before committees of inquiry; he is rebuffed by Governors; he carries on his usual approach to his duties. At the same time he bears an additional cross of no mean dimension. He has a sick wife who is publicly accused of alcoholic excess.

It is fitting that we as psychiatrists have a personal reminder of the balanced manner in which we should face the particular trials which are inevitable in our vocation.

Not one of us is immune from the threat of a public inquiry or court proceedings. In good faith and in the course of our duties we may be slandered, if not punished. The intramural psychiatrist must resolutely stand up to authority in order to help his patients.

Nor is the psychiatrist immune from the trials and tribulations of other men. At a time when work presses heavily there may be illness, a bereavement, or disaster in the family. Our personal lives may be dragged from their roots yet we must carry on as though nothing has happened. We must retain a balanced viewpoint. We must view the future with courage. We must have balance in spite of every obstacle which may arise. We must indeed follow the example of the first superintendent of Tarban Creek and with an even keel keep on keeping on.

#### *Conclusion.*

This story is nearly told. Through research in the early history of our psychiatric specialty there have emerged certain virtues which are timeless and changeless in the exercise of our daily tasks.

There remains the hope that they can be put to permanent use and not left to be unread in a printed page. History is valuable in revealing the lives of men in true perspective. We psychiatrists are fortunate in having the essential principles of our craft in a form which is easily accessible. The main features are shown in the accompanying drawing.

The Greek equivalents of the words "administration", "humanity", "enthusiasm", "knowledge", "balance" and "perseverance" symbolize essential qualities in the lives of those who wish to practise successfully the art and science of psychiatry.



A picture of "Tarban Creek" symbolizes the first organization of psychiatry in Australasia, and the letters "D.C." in the small circle are reminders of the first superintendents, Digby and Campbell. The words "Australasian Association of Psychiatrists" symbolize the creation and continued existence of a fellowship founded to further the progress of our science.

If we continue to use these symbols there is created an opportunity for the perpetuation of the essential concepts necessary to our craft.

I am indebted to Miss I. Goodin for an artistic representation of this material. It could be used as a seal, on letter-heads or in publications.

Finally I wish to point out that the lesson of history is the lesson of life. Tradition dies hard. In a changing world it is destroyed with difficulty. It energizes and adorns. In Tarban Creek we have all the elements necessary for a great and glorious tradition in the efficient practice of psychiatry.

By its use we possess a valuable means of controlling virtues which might be otherwise lost in the inevitable backlash which accompanies all evolutionary change.

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#### PSYCHOPATHIC PERSONALITY.<sup>1</sup>

By W. S. DAWSON,  
Sydney.

The term "psychopathy", meaning a mentally diseased state, has been applied in a general sense to include all sorts of mental abnormalities—for example, "psychopathic" heredity. The term "personality" would appear to imply relatively fixed enduring qualities as against isolated attacks of abnormality or the development of more or less profound modification of qualities.

The extension of extramural psychiatry has encouraged the multiplication of categories and the attempt to define various morbid types of personality, including those which display features of the well-established psychoses but in a mild, larval or prodromal form, for example the schizoid, paranoid and cyclothymic types. Other individuals in their

reactions to life behave more or less regularly in ways which merit the appellation anxious, obsessional or hysterical.

There does appear to be place for a label to apply to those persons who are neither intellectually subnormal nor certifiable under the Lunacy Acts, who again fail to satisfy the general criteria of psychoneurosis in that they are essentially uncooperative and do not respond to the usual or any therapeutic or corrective measures and who frequently or constantly display inadequacy in their adaptation to social demands. Further, there is a growing tendency to concede that the psychopath is a person with a limited sense of responsibility who should be dealt with accordingly by supervision or segregation under special conditions which differ from those which obtain for the intellectually defective, the insane and the criminal.

Macaulay wrote of a prominent political figure: "His intellect was in that most unfortunate of all states—too disordered for liberty and not sufficiently disordered for Bedlam."

At the same time this concept of psychopathic personality, like many others in general use in psychiatry, lacks clearly defined data which can be interpreted by different observers according to a standard measure.

Even at the risk of precipitating a philosophical controversy, it is difficult to avoid reference to the lack of a moral sense in the psychopath.

J. C. Pritchard (1835) wrote of moral insanity and moral imbecility:

There is likewise a form of mental derangement in which the intellectual functions appear to have sustained little or no injury, while the disorder is manifested, principally or alone, in the state of the feelings, temper or habits. In cases of this nature the moral and active principles of the mind are strongly perverted or depraved; the power of self-government is lost or greatly impaired, and the individual is found incapable not of talking or reasoning upon any subject proposed to him but of conducting himself with decency and propriety in the business of life.

Benjamin Rush had earlier (1800) coined the term "anomia". Koch (1888) appears to be the first to have used the term "psychopath". Partridge (1930) coined the word "sociopath".

#### Some Current Definitions.

Kahn (1931) states in his monograph:

By psychopathic personalities we understand those discordant personalities which on the causal side are characterized by quantitative peculiarities in the impulse, temperament or character strata and in their unified goal-striving are impaired by quantitative deviations in the ego and foreign valuations.

In these last words Kahn refers to the failure of psychopaths to conduct themselves with due regard to the comfort and rights of their fellow-men. Their values are determined by the gratification of their personal impulses, instinctive drives and needs rather than by their obligations to their fellows.

According to Kurt Schneider (1934) a psychopath is an individual with an abnormal or unusual personality who by reason of his abnormality either himself suffers or causes society to suffer. Schneider holds that this type comes within the range of normal human variation, with a quantitative rather than a qualitative differentiation from the average. However, in Britain and America it is more usual to refer to the person who suffers from his abnormality as psychoneurotic, while the person who causes society to suffer is termed a psychopath. There is, of course, no clear line of demarcation between the two classes.

Darling (1945) defines psychopathy as:

A mental disease which develops before or during puberty, caused by inherited predisposition or by acquired personality deviation due to psychic or somatic factors or both, which in turn cause super-ego deficiency; it is characterized by stereotyped deviations in the moral, social, sexual and emotional components of

<sup>1</sup>Read at a meeting of the Australasian Association of Psychiatrists, Sydney, October 29 to November 2, 1951.



the personality, without intellectual impairment, psychosis or neurosis, with loss of insight or ability to profit by experience, and is of lifelong duration in about all cases.

Professor Sir David Henderson (1950), who is the leading British exponent of this concept, states:

We include under this title persons who have been from childhood or early youth habitually abnormal in their emotional reactions and conduct, but who do not reach, except episodically, a degree of abnormality amounting to certifiable insanity; they show no intellectual defect as measured by the usual intelligence tests and therefore cannot be classified in terms of the Mental Deficiency Act; and they do not benefit under prison treatment.

He refers also to "rebellious, individualistic groups who fail to fit into their social milieu, and whose emotional instability is largely determined by a state of psychological immaturity which prevents them from adapting to reality and profiting from experience".

Henderson's classification of the predominantly aggressive and the predominantly passive or inadequate has great merit in application, since one of the most important and pragmatic judgements we can make about a person is the amount of aggressiveness or passivity in his behaviour. A third group described by Henderson, the creative—persons in whom abilities of social value with perhaps a record of exceptionally useful and worthy achievement are offset by a lack of common sense in everyday affairs and a lopsidedness which may amount to eccentricity—provides themes for biographers rather than problems for the consulting room.

#### Aggressive Psychopaths.

Aggressive psychopaths are persons with explosive irritability (some are epileptic) or with a proneness to acts of physical violence, such as assaults and destructiveness, active sex perverts, imposters and swindlers. They are seen mostly in forensic psychiatric practice as recidivists. Unlike other habitual criminals the delinquent psychopath seldom benefits materially from his crimes, though he may enjoy some brief and morbid gratification. Lack of common sense leads time after time to detection, and in spite of the punishment he continues to gratify some primary urge to possession, sex indulgence or notoriety, regardless of the consequences.

#### Passive Psychopaths.

Passive psychopaths are seen in ordinary psychiatric practice as inadequate individuals with neurasthenic and especially hysterical symptoms, who readily, and with few qualms of conscience, become social parasites within the family circle or in the general community. Their delinquencies are more petty than those of the aggressives, they tend to be led into crime by more "normal" criminals, and in sex perversion their role is more passive. The inadequate, dependent psychopath may be overlooked in a protective family setting until he is cast upon the world or called up for national service, while the aggressive types are more likely to come under official notice by reason of delinquency in childhood.

#### Causation.

In the present state of our knowledge heredity, constitution and environment—physical and psychological—will continue to be stressed as factors in causation with emphasis according to the bias of the observer. So much depends on what is available in history-taking and on how the history is taken. My personal inclination is towards the view that an inherent defect is the prime cause of the psychopathic personality, environmental conditions merely providing opportunity for manifestation. Slater (1948) postulates a multifactorial inheritance of numerous genes of small effect, as against single genes of large effect, and pleads that "it is in the organization of the brain that we must seek one of the principal factors in the determination of individual traits of personality, temperament and character". Henry Maudsley wrote (1876):

Moral feeling cannot, therefore, be considered satisfactorily from a mental standpoint alone, as if it had no connection with physical structure; it is a function

of organization and is as essentially dependent upon the integrity of that part of the nervous system which ministers to its manifestations as is any other display of mental function.

As regards physical structure we have certain "experiments of nature" as the late Adolf Meyer called them, the effects of disease such as encephalitis and of trauma, which may be followed by moral deterioration, and the decline of social sentiment and conscience which may be observed after therapeutic leucotomy. Finally, electroencephalographic readings taken from the basal structures of the brain promise to throw more light on this problem. The similarity between the records in certain adult psychopaths, both aggressives and passives, and those obtained from "normal" young children lends substance to the theory of immaturity in these individuals.

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## Reviews.

### GYNAECOLOGY AND OBSTETRICS.

W. F. T. HAULTAIN AND C. KENNEDY have covered a very wide field in their handbook,<sup>1</sup> and have presented in concise form a modern approach to the practice of obstetrics and gynaecology. The material appears in the form of summaries and classifications which will appeal to the final year student revising his subject, and to the practitioner seeking guidance on his current problems.

In the preface the authors refer to the new chapters on *placenta previa*, thrombosis, dysmenorrhoea and delayed labour, and it is apparent that much work has been done to present the more recent views on these subjects. Reference is made to the expectant management of *placenta previa*, and the use of anticoagulants in phlebotrombosis. It is noteworthy that the subject of the occipito-posterior position appears in the chapter on normal labour, although the authors refer to the increased risks to mother and child, and to the special degree of knowledge and skill required in the management of this frequently troublesome complication. The section on analgesics and anaesthetics is up to date, and the intravenous use of ergometrine in the treatment of post-partum haemorrhage is noted with appreciation. The section on the therapeutic use of hormones includes a useful list of trade names of preparations and dosages. The short section on the subject of the Rh factor in obstetrics is up to date, although earlier in the text, included in the indication for the induction of labour, is the Rh patient with antibodies present. It is particularly interesting to read the reference to the close integration of obstetric, paediatric and blood transfusion service in these cases. The section on infant management, always a problem to students and more so to general practitioners, is briefly and concisely covered.

Of the few procedures contrary to local practice were noticed the use of thyroid, five grains every four hours, in

<sup>1</sup>"A Practical Handbook of Midwifery and Gynaecology for Students and Practitioners", by W. F. T. Haultain, O.B.E., M.C., B.A., M.B., B.Ch., F.R.C.P.Ed., F.R.C.S.Ed., F.R.C.O.G., and Clifford Kennedy, M.B., Ch.B., F.R.C.S.Ed., F.R.C.O.G.; Including a Section on the Management of the Infant and Neo-Natal Conditions by J. L. Henderson, M.D., F.R.C.P.Ed.; Fourth Edition; 1952. Edinburgh: E. and S. Livingstone, Limited. 8½" x 6", pp. 422, with 47 illustrations. Price: 24s.

the treatment of oliguria in preeclampsia, and the application of forceps to the breech. These are small matters in the mass of excellent advice and the discerning reader will at once pick out the essential differences in the teaching of this volume and that of his own school. This book is not recommended as a basic text-book, but would be hard to surpass as a means of revising the principles of modern obstetrical and gynaecological practice.

#### HARE-LIP AND CLEFT PALATE.

"CLEFT LIP AND PALATE", by W. G. Holdsworth, will be welcomed by all surgeons interested in facial cleft surgery, crystallizing as it does the many factors that have led to the marked improvement in this branch of surgery in the last thirty years.<sup>1</sup> While it is essentially a product of the British school of plastic surgery, due credit is given to known authorities on this work in America and other countries.

An introductory description of the relevant anatomy precedes chapters devoted to development and to a description of the various deformities. Then follows an account of a number of the classical operations for single and double hare-lip. The diagrams in this section would have greater value if a few of the more important ones were printed in colour. A description of the classical cleft palate operations follows the same pattern, the diagrams in this section being all that could be desired. A number of coloured plates showing the nasal mucosa in red and the oral mucosa in green help to elucidate the various methods of suturing employed. The value of the chapter on secondary repairs would have been enhanced with more illustrations, as these operations are always notoriously difficult to describe in print.

The author has contented himself with an unbiased presentation of the views of numerous authorities and has carefully refrained from any personal dogma: for this reason the book will be of most advantage to those surgeons experienced enough to appreciate the implications of the variations in technique. It will be of value also to those sitting for higher surgical degrees, as there is a notable absence of padding and the approach is simple and forthright. Attention is directed to the fact that the recent improvements in technique are due largely to the high degree of specialization which has taken place in the treatment of these conditions.

In summary this little book may be described as a valuable surgical monograph of particular interest to those surgeons engaged in facial cleft repair.

#### OBSTETRICS.

THE fifth edition of Beck's "Obstetrical Practice" is without doubt one of the best of the American works on this subject.<sup>2</sup> It is quite up to date and comprehensive and can be recommended for the senior and post-graduate student, or as a reference book for the practitioner. Fetal physiology is presented in accordance with the latest work of Barcroft and Barron, while the complete story of normal pregnancy and labour is disposed of before any approach is made to the abnormal. Though somewhat tersely described in the actual text, mechanisms and manipulations are depicted with consummate clarity in a plethora of fine illustrations, diagrams and touch pictures. Indeed, this method of teaching by visual representation is a commendable feature of the book. One chapter is devoted to anomalies in the powers and three to faults in the passages, all of which merit careful study by those who seek help in the problems of uterine inertia and dystocia from disproportion. The traditional concept of toxæmia in pregnancy is not accepted, for, as the author stresses, there is no evidence that toxins are involved. Thus preeclampsia and eclampsia are delightfully presented as "a vascular and/or water balance disturbance of pregnancy", while hyperemesis becomes "a

metabolic disturbance in emotionally unstable women" and acute yellow atrophy "one of the medical complications of pregnancy". The concluding chapter is a concise outline of the various methods used to produce analgesia, amnesia and anaesthesia. The bibliography is so extensive that the study of any branch of obstetrics is made readily possible to all who have access to a large medical library.

#### FRACTURES AND JOINT INJURIES.

IN the preface of his book on fractures and joint injuries Sir Reginald Watson-Jones apologizes for this new edition being overdue.<sup>3</sup> It has been well worth waiting for.

The same high standard which characterized the third edition is maintained. The illustrations which have been considerably augmented, particularly in the colour section, are uniformly excellent.

This volume does not deal specifically with regional fractures, but embodies mostly the principles of fracture treatment and the complications of fractures and of injuries generally.

The chapters on the mechanism of repair of fractures, delayed union, and non-union have not been altered much, but are well worth re-reading. Vascular injuries are dealt with in the same interesting manner as in the third edition and this subject is brought up to date by the mention of some modern methods of arterial bridging by vitallium tubes.

Some excellent new material is included, of which chapter 11 stands out. This ingenious and interesting chapter deals with the reactions of bone to metal. The author sets forth strong views against the use of compression in an endeavour to secure quick bony union. He claims that compression of bone, in fact, leads to resorption and delayed union.

There is also an excellent chapter on shock, stress, and the adaptation syndrome with good practical hints on the treatment of shock. In connexion with the "muscle shock factor" the author deals with the problem of the overlooked tourniquet. If a tourniquet has inadvertently been left on for many hours its removal will inevitably lead to serious shock and uræmia, which may be fatal. Recovery after removal of a tourniquet which has been in position for nine hours has not been reported. The author concludes that if an overlooked tourniquet has not been removed for six hours or more, it should not be released, but the limb should be amputated at a level proximal to the tourniquet.

The author insists upon the old principle that internal fixation by metal in lower limb fractures cannot be relied upon to secure permanent bony union if weight bearing is allowed before bony union is sound.

The book keeps a good balance between the new and the old, and one gets the impression that the author has kept an open mind on new developments without being too eager to trade "old lamps for new".

#### "MIND, A SOCIAL PHENOMENON."

IN "Mind, a Social Phenomenon", Dr. F. S. A. Doran, surgeon and demonstrator in anatomy, reviews the evidence for the assumption that mind is an expression of brain function and more particularly considers the influences of tradition and social values in moulding its form.<sup>4</sup>

The first chapter is devoted to a somewhat threadbare survey of concepts and theories concerning the nature of mind. In chapter two, "The Past and the Present", the author refers to religious beliefs from early Egyptian up to the Christian eras in support of his suggestion that a large part of man's mind can be properly assessed only as a social phenomenon. "The Content of Mind" is discussed in chapter three, in which Dr. Doran supports the old saying, "*nil in intellectu nisi prius in sensu*".

Medical readers will pay most attention to chapter four, "The Medical Mind, a Social Phenomenon", in which the

<sup>1</sup>"Cleft Lip and Palate", by W. G. Holdsworth, F.R.C.S. (Edinburgh), F.R.C.S. (England), with a foreword by Harold Gillies, C.B.E., F.R.C.S.; 1951. London: William Heinemann (Medical Books), Limited. 10" x 7½", pp. 138, with 87 illustrations, a few in colour. Price: 35s.

<sup>2</sup>"Obstetrical Practice", by Alfred C. Beck, M.D.; Fifth Edition; 1951. Baltimore: The Williams and Wilkins Company. Sydney: Angus and Robertson, Limited. 10" x 7", pp. 1086, with 22 plates and 947 illustrations. Price: £5 7s. 6d.

<sup>3</sup>"Fractures and Joint Injuries", by Reginald Watson-Jones, B.Sc., M.Ch.Orth., F.R.C.S., F.R.A.C.S. (Hon.), F.A.C.S. (Hon.); Fourth Edition; Volume I; 1952. Edinburgh: E. and S. Livingstone, Limited. 10" x 7", pp. 468, with 709 illustrations, many in colour. Price: £6 per set of two volumes.

<sup>4</sup>"Mind: A Social Phenomenon Illustrated by the Growth of Medical Knowledge", by F. S. A. Doran, M.A., M.D. (Cantab.); 1952. London: Watts and Company. 8" x 5½", pp. 186. Price: 10s. 6d.

history of theories concerning disease is covered in some forty pages. "In the main", says Dr. Doran, "the professional part at least of the physician's mind has been created by social forces." He might have quoted Stephen Paget, who said years ago: "So true it is that it is not we who make our profession, but our profession which makes us." The "Development of the Mind" forms the subject of chapter five. It would seem that our minds are ever striving towards an almost mathematical adjustment to environment. To quote: "The scientific mind has grown, therefore, by weaving patterns and hoping they would coincide with that of Nature." We try to be "in tune with the infinite". In this chapter especially we wish that Dr. Doran had speculated less and devoted more space to recent work on cerebral functions.

In the last chapter, "Patterns of Culture", Dr. Doran pleads for individualism and decentralized research, because of the conservatism of human societies and the inhibiting effects of authority. New ideas tend to be regarded as dangerous.

The author might have devoted much more space to the "remarkable discoveries of science, particularly in human physiology and medicine", which in his opinion offer a solution to the age-old problem of the nature of the human mind. Too much attention is given to the survey of old beliefs and philosophies.

The book should appeal to a wide range of readers, but will be regarded as superficial and poorly synthesized by philosophers, psychologists and physiologists. A bibliography of some hundred titles will encourage readers to inform themselves more fully on many topics to which the author has referred in the briefest of terms.

#### VERSATILE DOCTORS OF THE PAST.

For a long time it has been generally recognized that many doctors throughout the ages have attained distinction in fields of knowledge and skill other than that of medicine; in fact, more than a few interested members of the profession have indulged the quiet pastime of collecting material relating to this very subject, perhaps in the hope of one day publishing a composite article for the eager delectation of their colleagues. However, in this regard all prospective authors have been splendidly superseded by the Emeritus Professor of Medicine in the University of Glasgow, Dr. Thomas Kirkpatrick Monro, who has been so thorough in his research and so methodical in the arrangement of his material, that his book, "The Physician: As Man of Letters, Science and Action", is likely to remain a masterpiece in the artistic presentation of this fascinating subject.<sup>1</sup>

In his preface to the second edition, Professor Monro informs us that the original text published in 1933 has been completely revised and considerably enlarged by the addition of material that has since come to hand. For more than twenty years he has been diligently collecting biographical information about members of the profession whose exceptional gifts were not limited to medicine; and he goes back to Theophrastus, who departed this life in 285 B.C., leaving botany a more exact science for later physicians to follow. The whole work is ingeniously presented under a number of different sections, some of which may be mentioned to indicate the wide field of activity covered in the survey: Poetry, Drama, Fiction and General Literature, Scholarship and Bibliography, The Stage, Philosophy, Law and Politics, Administrators, Soldiers, Explorers, Science and Invention, Art and Music, Piracy and Crime.

It is noteworthy that Professor Monro gives full accord to the versatile genius of Dr. Thomas Young, a Fellow of the Royal College of Physicians of London, who was so obsessed with the desire to be known to the world as a practising doctor of medicine, that he persisted in hiding under the cloak of anonymity his manifold gifts as mathematician, physicist, and supreme authority on many ancient, modern and oriental languages; and this peculiar medical fetish was the subsequent cause of much controversy over his undoubted priority in the decipherment of the lost Egyptian hieroglyphic writing. Perhaps the fact might have been mentioned that Young was elected a Fellow of the Royal Society of London shortly after his twenty-first birthday for elucidating the problem of visual accommodation of the eye, which he investigated while learning his anatomy in the dissecting room of Saint Bartholomew's Hospital, London.

<sup>1</sup>"The Physician: As Man of Letters, Science and Action", by Thomas Kirkpatrick Monro, M.A., M.D., LL.D.; Second Edition, 1951. Edinburgh: E. and S. Livingstone, Limited. 3" x 6", pp. 268. Price: 21s.

Professor Monro says: "Genius equal in versatility to that of Thomas Young must be rare indeed." It might not have been an overstatement to say that he was the greatest universal genius of all time.

The short biographical notes of each subject are arranged in alphabetical order under the appropriate section; and they are uniformly written in a polished literary style that is lucid, concise and always elegant. There are two accurate and helpful indices at the end of the book. The first contains the names of those persons mentioned in the text, while the second is a general index which enables the reader "who is interested in any particular subject to compile a list of medical men who are similarly interested, or whose names are associated with the same department of human activity".

#### MENTAL DISEASES.

In "New Outlook on Mental Diseases" Dr. F. A. Pickworth has summarized the work of a quarter of a century as pathologist to the mental hospitals of the City of Birmingham where he was closely associated with T. C. Graves, who followed Cotton, of the United States of America, in regarding the eradication of focal sepsis as essential in the treatment of mental disorders.<sup>1</sup>

The subjects discussed include neuron metabolism, cerebral blood supply, allergy and toxic infections, chronic focal pathology and nature of mind. The reader should pay special attention to the chapter on the organic basis of mental disorder and defect, a few quotations from which give some indication of the author's viewpoint. "The organic basis of paranoia is due to the presence in the nervous systems during sex maturation of secondary inflammatory foci from a source of chronic sepsis." "Reduced bloodflow to posterior hypothalamus is responsible for cerebral cortical disuse atrophy" (in schizophrenia). "E.C.T. may convert a melancholic case to one of mania from the inflammatory reaction." "Blood pressure and sugar are low in mania, high in melancholia." "After the age of, say, 65, skeletal muscles tend to atrophy. As a consequence attention to everyday affairs is lessened and memory for recent events is poor." According to Dr. Pickworth the essential basis of the majority, if not all, mental disturbances is sphenoidal sinusitis causing focal anaemia or hyperaemia in the nearby brain stem. Pigs kept in captivity regularly develop sinusitis, we are told, but Dr. Pickworth does not mention bulldogs. There are several well-produced plates, some in colour, including illustrations of sections stained by the author's special benzidine technique. The activity of the nervous system is reduced to the common denominator of vasomotion, and this revives the suggestion put forward by Benjamin Rush a century and a half ago that "the course of madness is seated primarily in the blood vessels of the brain". Neurology is concerned with the conditioning of nervous pathways, psychology with "pattern changes of blood flow in centres associated with mental and emotional activity". It is all as simple as that. While this work is commended to pathologists and psychiatrists, it is doubtful whether Dr. Pickworth has made out a case sufficiently convincing to restore focal sepsis to its former importance in the list of factors. There are over six hundred references.

#### NEUROLOGICAL EXAMINATION.

"THE NEUROLOGIC EXAMINATION", by Russell N. DeJong, is an exposition of the application of anatomy and physiology to the examination and diagnosis of neurological disease.<sup>2</sup>

It is a large book, beautifully produced and containing almost 300 illustrations, many of them excellent clinical photographs. It is probably the most complete volume yet produced, welding these subjects into a single text. The best chapters are those on the motor system and reflexes and much space is deservedly given to the cranial nerves. Much else in the book is valuable and not readily found in existing texts.

<sup>1</sup>"New Outlook on Mental Diseases", by F. A. Pickworth, M.B., B.S., B.Sc.; 1952. Bristol: John Wright and Sons, Limited. 11" x 7 1/2", pp. 304, with 41 illustrations, some in colour. Price: 60s.

<sup>2</sup>"The Neurologic Examination: Incorporating the Fundamentals of Neuroanatomy and Neuropsychology", by Russell N. DeJong, M.D.; 1950. New York: Paul B. Hoeber, Incorporated. 10" x 7", pp. 1098, with 368 illustrations. Price: \$15.00.



Yet, it is felt that this book will not find a high place on the shelves of first-class neurological literature, mainly because the author has not succeeded in making the clear principles and important essentials of clinical examination stand out plainly from the wealth of detail which he has included in an obvious effort to make the book "complete". In pursuit of this aim, he has devoted much space to anatomy and physiology and the enumeration of the clinical conditions in which the abnormal physical signs are found, at the expense of explicit and complete instruction in the methods of examination, which the title leads one to expect. In doing so, his literary style tends to fall to a level little above that of a catalogue. Thus, it cannot be seen that his book will come into everyday use.

The student, seeking simplicity and clarity, will be overwhelmed by more medullary syndromes than the average neurologist meets in a lifetime, and more reflexes than one would imagine human ingenuity could devise, all glorified with proper names.

The initiated will find tedious the repetition of well-known simple facts, such as that hypotonia exists "in deep sleep, syncope and directly after death", and be critical of some of the theories of advanced physiology (stated as facts), especially those of cortical and extrapyramidal function.

There is a full list of the causes of exophthalmos and proptosis, but no instruction how to measure them—not easy and surely important. In contrast, there are full details on how to examine optico-kinetic nystagmus, but no explicit statement of what exactly it signifies.

Most clinical procedures can be learnt only in the wards, but, surely, in a book which sets out to teach them, the rather difficult art of examining muscle tone deserves more than one of ten pages in a chapter on tone.

Adequate references, unfortunately not annotated from the text, are found at the end of each chapter. Thus, the book will serve as a helpful reference for many useful clinical manoeuvres and some clinical tricks, but the student will surely be happier with the shorter and cheaper books.

#### PHARMACOLOGY—THE FOUNDATION OF THERAPEUTICS.

CLARK'S "Applied Pharmacology" has always been a vital text-book in the teaching of pharmacology for students of science and medicine. The eighth edition which has just been published gives new life to this popular text.<sup>1</sup> The previous editions appeared at intervals of three or four years since the first edition in 1923, but there has been a lapse of some twelve years since this book was last brought up to date. During that time A. J. Clark has died and the authorship of this book has been taken over by Dr. Andrew Wilson and Dr. H. O. Schild. Both of these men have been engaged for many years in active teaching and research in pharmacology in London, and, whereas Dr. Schild has been most interested in the fundamental studies of drug action, Dr. Wilson has added very considerably to the assessment of drugs in their therapeutic applications.

The new edition is thoroughly up to date and there are a number of changes upon which the authors are to be complimented. All the doses referred to are given in the metric system which is in keeping with current practice, and which will receive official endorsement in the new edition of the British Pharmacopoeia at present in preparation.

Once again "Applied Pharmacology" attempts to cover the whole field of the subject, a very considerable achievement in a book of normal dimensions. After some introductory chapters on the general principles of pharmacology, the administration of drugs, and a general discussion of the pharmacology of the autonomic nervous system the book develops as a systematic account of the symptomatic drugs and concludes with some five chapters on chemotherapy.

At the end of each chapter the official preparations of the drugs are listed and there is also a useful, though rather small, list of general reading.

The book has one feature which can only be regarded as irritating, unfortunately, too, a feature which is seen in several of the newer text-books. We refer to the practice of giving the authors and year of the more important developments in the text; and yet no references or bibliography can

<sup>1</sup> "Clark's Applied Pharmacology", revised by Andrew Wilson, M.D., Ph.D., F.R.F.P.S., and H. O. Schild, M.D., Ph.D., D.Sc.; Eighth Edition; 1952. London: J. and A. Churchill, Limited. 9" x 6", pp. 704, with 120 illustrations. Price: 37s. 6d.

be found to follow these up. Admittedly the work referred to is frequently well known, but for the student or busy practitioner recourse to the "Cumulative Index Medicus" is not such an easy matter as it is for the research worker, who probably knows most of these papers anyway. This is undoubtedly a small point, but these pseudo-references sometimes occur two or three on a page.

Wilson and Schild have had a difficult task in the compilation of this comprehensive work and they have done the job well. As a general text-book or lesser reference book "Applied Pharmacology" is thoroughly to be recommended and furthermore is pleasantly readable as well.

#### Books Received.

[The mention of a book in this column does not imply that no review will appear in a subsequent issue.]

"Modern Practice in Tuberculosis", edited by T. Holmes-Sellers, M.A., D.M., M.Ch., F.R.C.S., and J. L. Livingstone, M.D., F.R.C.P.; 1952. London: Butterworth and Company (Publishers), Limited. In two volumes. 10" x 7", pp. 975, with 263 illustrations, a few in colour. Price: £10 10s.

All aspects of tuberculosis are dealt with, each by an appropriate authority.

"The 1951 Year Book of Orthopedics and Traumatic Surgery (November, 1950-November, 1951)", edited by Edward L. Compere, M.D., F.A.C.S.; 1952. Chicago: The Year Book Publishers, Incorporated. 8" x 5½", pp. 380, with 220 illustrations. Price: \$5.50.

One of the Practical Medicine Series of Year Books.

"The 1951 Year Book of Neurology and Psychiatry (November, 1950-October, 1951)", Neurology, edited by Roland P. Mackay, M.D.; Psychiatry, edited by Nolan D. C. Lewis, M.D.; 1952. Chicago: The Year Book Publishers, Incorporated. 8" x 5½", pp. 556, with 109 illustrations. Price: \$5.50.

One of the Practical Medicine Series of Year Books.

"A Text-Book of Inorganic Pharmaceutical Chemistry", by Charles H. Rogers, Sc.D., Sc.D. (Hon. Univ. Mich.), Taito O. Soine, Ph.D., and Charles O. Wilson, Ph.D.; Fifth Edition; 1952. Philadelphia: Lea and Febiger. Sydney: Angus and Robertson. 9½" x 6½", pp. 850, with 22 illustrations. Price: £5 7s. 6d.

For students of pharmacy and pharmacists.

"British Empire Cancer Campaign: A Survey of Cancer in London: Report of the Clinical Cancer Research Committee", by W. L. Harnett, C.I.E., M.D., F.R.C.S., Lt.Col. I.M.S. (Ret.), with a foreword by the Right Honourable Lord Horder, G.C.V.O., M.D., F.R.C.P., and an introduction by Heneage Ogilvie, K.B.E., D.M., M.Ch., F.R.C.S.; 1952. London: The British Empire Cancer Campaign. 10" x 7½", pp. 840, with 20 text figures. Price: £2 10s. (cloth bound) and £2 5s. (paper bound).

A report of work undertaken by direction of the Clinical Cancer Research Committee of the British Empire Cancer Campaign. It deals mainly with differential treatment and its results.

"Modern Trends in Neurology", edited by Anthony Felling, B.A., M.D., F.R.C.P.; 1951. London: Butterworth and Company (Publishers), Limited. Sydney: Butterworth and Company (Aust.), Limited. 10" x 7", pp. 726, with 202 illustrations. Price: 89s. 6d.

Contains some of "the more interesting and valuable additions to the science and practice of neurology" in recent years.

"Modern Treatment Year Book, 1952: A Year Book of Diagnosis and Treatment for the General Practitioner", edited by Cecil Wakeley, K.B.E., C.B., M.Ch., D.Sc., F.R.C.S., F.R.S.E., F.A.C.S., F.R.A.C.S. (Hon.); 1952. London: Published for The Medical Press by Baillière, Tindall and Cox, Limited. 9" x 6", pp. 386, with 84 illustrations. Price: 17s. 6d.

Essentially a practical book.

# The Medical Journal of Australia

SATURDAY, JULY 12, 1952.

All articles submitted for publication in this journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

References to articles and books should be carefully checked. In a reference the following information should be given without abbreviation: surname of author, initials of author, year, full title of article, name of journal without abbreviation, volume, number of first page of the article. If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

Authors who are not accustomed to preparing drawings or photographic prints for reproduction are invited to seek the advice of the Editor.

## A FINAL CALL TO MELBOURNE.

Most of us are familiar with the story of the long-winded preacher who seemed unable to finish his discourse—he had several sections which seemed to be near the end but were not. He had: "In Conclusion", and then, "Finally", and then, "One Last Word". We make no promise that this will be our last editorial reference to the forthcoming congress in Melbourne. This congress which is to begin on August 22 and last till August 29 has already attracted the attention of members of all the Branches and many have applied for membership. This "final call" is obviously not for them; it is directed to those who cannot make up their minds to attend, and to those who have not thought about it. In the issue of June 28 the programme of meetings of the several sections was published in full. This together with the plenary (or "quiz") sessions should make a tempting fare. The sectional programme may be slightly altered in detail before congress starts, but the main features will stand as they have been announced. Those who are hesitating are urged to decide to attend. Perhaps they have not attended a congress in Australia. In that case they will discover that the formal and informal discussions will be invaluable to them and that the social occasions will extend their acquaintance among practitioners from different centres in the Commonwealth. This will give them an over-all perspective that cannot fail to be beneficial as well as full of interest. This same message is, of course, the one for those who have not thought about congress.

## ANOTHER ENGLISH "EXPERIMENT" IN MEDICAL PRACTICE.

In Great Britain they seem to have the habit of introducing drastic changes in medical practice in certain places and of calling them experiments. We remember reading with interest of the Peckham Experiment, an important venture in social medicine, and with disappointment of its abandonment. Now we have, described in *The Lancet* of February 23, 1952, what is called the Hengrove Experiment, a "paediatric general practice". The

description, which is given by Dr. Norman J. Cook, is provocative and should be brought to the notice of Australian practitioners in medicine. The title of the practice alone is challenging. Paediatrics is a specialty, and if we can have a paediatric general practice, we might as well suggest the carrying on of a gynaecological general practice, or a geriatric general practice. However, let us not quibble at the name, but endeavour to find out of what this experiment consists.

In the first instance it must be made perfectly clear that this new venture is undertaken in a country with a national health service which is without immediate cost to every member of the community. The words "without immediate cost" are, of course, used advisedly, because though the sick person does not pay anything at the time he receives service from a doctor, he and everybody around him pay for the service as a whole. Dr. Cook points out that the health of the child is the responsibility of the local authority, of the local executive council through the child's general practitioner, and of the regional hospital board when necessary. This division of responsibility is no new phenomenon. It existed before the introduction of the National Health Service. Each child is now entitled to the care of a general practitioner, but the practitioner, we are told, receives no payment for supervising the healthy baby or child as he does for looking after the health of the expectant mother. Lack of time discourages him from undertaking such work, which is now associated with public health departments. The way in which a child is normally seen by several doctors—at home, at school, and at clinics—means an overlapping of services. It has been suggested by Helen Mackay and by Alan Moncrieff that the solution of the overlapping will be found when group practice in health centres becomes usual. In these circumstances a member of the group should specialize in paediatrics and look after the children in health as well as in disease. Dr. Cook points out that this will mean that, in a group practice, four or five doctors will have to be found who are willing to subsidize to some extent their colleague specializing in paediatrics. Here, of course, we run up against the contradiction in nomenclature once again, because the one practitioner will be a specialist in paediatrics (Cook uses the term) and will be engaged in a general practice of that subject. Dr. Cook points out that the Hengrove Experiment presents an attempt to demonstrate how a "complete and nearly comprehensive health service" can be provided under one authority and by one practitioner.

The Hengrove Child Health Centre was started in the suburb of a large city in October, 1947. It was intended that the doctor, who worked in a small waiting room and consulting room in a semi-detached suburban house, would show parents that he was interested in the child's health as well as in his disease. Despite expressions of medical opinion that the venture would never succeed, the number of patients grew until removal to larger premises made it possible to provide a range of health services "comparable to that provided for normal children by the local authority". All patients are registered as in any other national health service practice. An infant welfare clinic is held on one afternoon a week, and babies can be brought for advice and examination; an ailment can be treated on the spot and the child does not have to be referred else-

where. We read that the doctor has a great advantage over the public health medical officer in that he has probably visited the home and knows the family background. Parents are asked not to attend the school clinic in order to preserve the principle that supervision is continuous and that the child has only one doctor. With day clinics and domiciliary visits, an ordinary general practice practitioner service is provided. Children who are four years of age and more, and too old for infant welfare supervision, are invited to attend by appointment once a year for a complete physical examination, including anthropometry and tuberculin testing. This gives the doctor an opportunity to check the child's immunization and to talk with the parent on matters of physical and mental health that would not be raised "in the busy rush of an ordinary surgeon". Children who have to be seen as a routine oftener than once a year are given appointments for special sessions. These special sessions are intended for sufferers from primary tuberculosis, asthma, nephritis or malnutrition. "The absence of waiting in a queue encourages mothers to bring their children regularly."

Dr. Cook states that four years of experience of running a wholly paediatric general practice has convinced him that the service given to children is more efficient and effective than that obtainable under the ordinary "piece-meal arrangement". He does not claim that all difficulties have been surmounted and he explains, for example, that it has not been possible so far to examine members of the health centre in the school, so that valuable contact with the child's teachers is lacking. This, it must be admitted, is an important defect, for, as Cook points out, personal contact with teachers and with the school atmosphere is essential for an understanding of the many management and behaviour problems that have to be treated in children. Also school examinations are the only means of reaching children of a small minority of parents who will never bring their children for examination when invited. Again, Cook makes what he calls a "valid criticism" that the general practitioner paediatrician may be ignorant of important facts about the health of his patient's parents when he does not see them professionally, and that lack of this knowledge may lead to a misunderstanding of the child's symptoms. This is an important criticism, because the paediatric general practitioner, in such an arrangement as that described, will oust the family doctor from part of his domain. The family doctor is, and will remain, the most important agent in the conservation of health and in the fight against disease. Cases are bound to arise in which no paediatrician, however experienced he may be, will be able to size up and treat adequately the child's illness and the conditions surrounding it, unless he has knowledge of all the persons and factors in the child's environment. The family doctor who does his work properly—and large numbers of them in this country do—will not cast a professional eye at the children of the family he attends only when they are ill and he is called upon to attend them. Further, when he needs special help he can easily obtain it. The departmental school medical service is there to assist him; it is not intended, and does not try, to supersede him. If he stands in need of the advice or assistance of a paediatric specialist, he can easily obtain it from a private consultant or from a hospital. If intermediate fees are to be

charged, this can be arranged. (In New South Wales an intermediate paediatric service has recently been started, but this is a story for another occasion.) On the staffs of children's hospitals in the Commonwealth of Australia medical officers are appointed as physicians, surgeons and other specialists. Some paediatricians in private practice do not confine themselves entirely to medicine or surgery, and to this extent they are general practitioners. Whether this attitude is justified need not concern us; the point is that any general practitioner who needs help in the treatment of a sick child will easily have his need satisfied. We have given a short account of what is known as the Hengrove Experiment. Dr. Cook does not tell us how the practice is financed; he does state that the doctor should receive a recompense much higher than the capitation fee which exists at present. This is not our immediate concern. The most important consideration against such a proposal as that put forward by Dr. Cook is the fact that when the child reaches fourteen or fifteen years of age, he or she will be no longer suitable for the care of a paediatrician, and will have to find another general practitioner. This is to be deprecated. With the family doctor no change would have to be made. Many family doctors attend mothers when their children are born, attend these children as they are growing up, and in turn, superintend the birth of a second generation to the comfort and satisfaction of everyone concerned. We do not anticipate that the Hengrove Experiment will be made in Australia.

## Current Comment.

### SELF-DEMAND FEEDING.

Rigid feeding schedules for infants are almost universally in use. However, primitive communities have a higher incidence of successful lactation than more civilized ones, and it has been found that insufficient emptying of the breast is probably the commonest cause of the failure of lactation. A rigid feeding schedule could hardly have been intended by Nature, and so it may be inferred that one factor contributing to this higher incidence of successful lactation in more primitive communities might be an elastic feeding schedule. Babies on self-demand feeding seek very frequent feeds from the fifth to the eighth day of life, and because of these more frequent feeds probably take more milk from the mother, suck better and empty the mother's breast better, thus avoiding over-distension, and so increasing the incidence of successful lactation. This whole problem has been subjected to careful experimental investigation and analysis by R. S. Illingworth and D. G. H. Stone with statistical help from G. H. Jowett and J. F. Scott, and their results are published in a closely reasoned paper.<sup>1</sup> The experiment was planned to feed 100 babies on a self-demand schedule and 100 on a rigid schedule, comparing the weight gain in the two groups, the incidence of over-distension of the breast in their mothers, and the incidence of full breast-feeding on discharge from hospital and at the age of one month. There was no selection, but prematurely born babies and those showing any form of cerebral irritability were excluded. In all cases the baby was in a crib at the side of the mother day and night, and was not taken away from her for any purpose. All the babies were under the care of the one paediatrician. The results were quite definite and should lead to greater use of a more elastic feeding schedule than that usually employed.

In the first two days all the babies in both groups were put to the breast six-hourly, two minutes on each breast at each feed on the first day, and five minutes on each breast at each feed on the second day. Although there is

<sup>1</sup> *The Lancet*, April 5, 1952.



no evidence for this, it was feared that more frequent feeds in the first two days might cause soreness of the nipples. From the third day onwards the babies in the control group were fed four-hourly (six feeds in twenty-four hours), and those in the self-demand group were fed when they wanted it, day or night. All babies were weighed naked at birth and on the third day and thereafter on alternate days, and test feeds were made on the sixth and eighth days, the baby being weighed before and after every feed in the day. If over-distension of the breast occurred, and was not relieved by the baby, then the milk was expressed manually. The mean number of daily feeds in the demand group was 6.4, but on the fifth day 28.6% and on the seventh day 15.5% of the babies demanded eight feeds or more. By the ninth day the weight progress of the children showed that the weight was greater for demand-fed than rigidly fed babies, varying from two ounces greater for light to three and a half ounces greater for heavy babies. On this day 49.1% of the "demand group", as compared with 36.1% of the "rigid group", had recovered their birth weight. Test feeds showed that less milk was taken when there was soreness of the nipples and over-distension of the breast tended to be associated with large test feeds. Gain in weight increased as the average number of daily feeds increased, and this was greater in lighter babies than in heavier ones.

Of the mothers feeding babies on the rigid schedule 27.4% developed soreness of the nipples compared with 12.9% of those feeding babies on demand. The corresponding figures for over-distension of the breast are 34.0% and 16.9%, these differences being statistically significant. It was noted, also, that over-distension of the breast, provided it was not severe and was properly treated, did not have an adverse effect on the incidence of breast-feeding. Thus 80.5% of the mothers in the "rigid group" who had over-distension were breast-feeding their babies at the end of a month as compared with 55.9% who did not have over-distension. Soreness of the nipples, on the other hand, has a bad effect on lactation, and the corresponding figures for the incidence of breast-feeding at the end of one month are 54.8% and 77.8%. The authors conclude that self-demand breast-feeding, by causing better emptying of the breast, and leading to less frequent soreness of the nipples than a rigid schedule, has a favourable effect on the establishment and maintenance of lactation. Contrary to expectations, it was found that a rigid schedule involved more work for the nurses and took up more nursing time. This scheme thus commends itself particularly in those places where there is a shortage of nursing staff.

#### HYPNOSIS IN CHILDBIRTH.

RECENT decisions in English courts in cases involving stage hypnotism and the consideration of this matter by the House of Commons have focused the interests of many, both inside and outside the medical profession, on the more legitimate aspects of the use of hypnosis in medical practice. Although hypnotism was frequently employed by high priests of ancient civilizations, its scientific history really began with Anton Mesmer in the latter part of the eighteenth century. It was he who coined the terms hypnosis and hypnotism. During the past thirty years many papers have appeared dealing with the effective use of hypnosis in the fields of psychiatry and experimental psychology, and also as an anæsthetic agent in surgery and dentistry. In 1946 this journal published an interesting paper by Sampimon and Woodruff,<sup>1</sup> describing 29 surgical and dental operations successfully performed under hypnosis in a prisoner-of-war camp in Singapore during the Japanese occupation. Referring to the safety of hypnosis, a leading article in the *British Medical Journal* in 1949 stated: "There is no evidence that in capable and conscientious hands hypnotism, repeated as many times as is desired, carries with it any physical or psychological danger to the patient." Special reference has often been made to the application of hypnotism in the relief of pain

during childbirth. De Lee wrote: "While I have not used pure hypnotism very often, I have used suggestion a great deal, indeed almost constantly, and I am irked when I see how my colleagues neglect to avail themselves of this harmless and potent remedy. It accounts for easily half of the success of local anæsthesia." The technique of Grantly Dick Read in stressing the use of education, relaxation and suggestion is only carried one stage further by employing trance states in an attempt to abolish pain during childbirth. A. M. Michael has investigated the use of hypnosis in childbirth for a series of 30 patients, six of them *primiparae* and 24 *multiparae*.<sup>2</sup> All the subjects were volunteers and were obstetrically normal at the thirty-fourth to the thirty-seventh weeks of pregnancy. Only one case was rejected during the ante-natal period because of a failure to achieve hypnosis after three attempts. No patient was seen before the thirty-fourth week, and training sessions in hypnosis, varying from two to eleven in number, were held until full term. The number of these training periods did not appear to have any exact bearing on the resultant behaviour of the subject during labour. The depth of hypnosis was assessed in five different grades, and in the training sessions attempts were made to attain as deep a degree of hypnosis as possible. The majority of patients attained a medium trance, but, here again, there appeared to be no definite correlation with the subsequent depth of hypnosis during the actual childbirth. Rapport was established by careful and sympathetic discussion while the patient was in the trance state. At each session post-hypnotic suggestion was given that labour would be painless, the only sensation to be expected being a feeling of tightness in the lower part of the abdomen and lower part of the back during the uterine contraction. The patient was also told that she would look forward to the actual confinement with a feeling of confidence rather than one of fear and apprehension, and relaxation was taught. After the first two sessions mass hypnosis in groups of six gave satisfying results, a great deal of time thus being saved. During labour Michael found the most satisfactory method to be the induction of hypnosis only when labour was well established and the os was at least "two fingers" dilated. The patient could also be trained to hypnotise herself or a post-hypnotic suggestion was made that she enter the trance state at the appropriate time during labour; the disadvantage of such procedure was that the patient might do so at the beginning of false labour. Michael states that during the second stage of labour it is advisable that the hypnotist is present continuously, so that the expulsion of the baby may be aided by the voluntary efforts of the subject under the instructions of the obstetrician-hypnotist. Episiotomies can also be performed painlessly and subsequent repair be made without anæsthesia. The patient is awakened only at the conclusion of the third stage and after she has been made comfortable. Although not statistically significant because of the small number of cases and the large normal variation, the results in this group compared with a control group indicate that the duration of labour is somewhat decreased during hypnosis. Of the 30 patients, 28 behaved very well during the first stage of labour, the exceptions being two young *primiparae*, aged sixteen and nineteen, brought to hospital after many hours of strong labour at home. Of the remaining 28 patients, 25 were in an extremely satisfactory condition during the second stage of labour. In a further three cases failure occurred during the actual delivery of the infants. Thus of the original 30 patients, 23 had completely painless labours, without having received any drug whatsoever. All patients were very pleased with the experience, and only one woman expressed a desire for analgesia in the event of a subsequent pregnancy. Michael concludes that with proper selection of cases these figures could be improved upon. The percentage of individuals that can be hypnotised is disputed by different authors, but a pregnant woman, especially if she volunteers, is an exceptionally good subject for hypnosis.

<sup>1</sup> "The 1939 Year Book of Obstetrics and Gynecology", 1939, page 164.

<sup>2</sup> *British Medical Journal*, April 5, 1952.

<sup>1</sup> THE MEDICAL JOURNAL OF AUSTRALIA, Volume I, 1946, page 393.

## Abstracts from Medical Literature.

### PATHOLOGY.

#### Tumours of the Pituitary Body and its Environs.

E. S. J. KING (*The Australian and New Zealand Journal of Surgery*, February, 1952) states that tumours and cysts of the pituitary region may be simple or complex in form. The complex structures, usually para-pituitary in position, are commonly regarded as having an origin directly from such archaic structures as the hypophyseal duct or less clearly recognizable "cell residues". The assumption that such tumours or cysts arise from special tissues is due to the view that only these possess the potentialities for production of several tissues and that such capacity is not present in more adult structures. This assumption is misleading on two accounts: (i) the cysts and tumours are not in reality as complex as cursory examination would suggest; (ii) investigation shows that powers of differentiation greater than those previously recognized are, in effect, present in adult tissues. The various tissues that are seen in these complex structures develop by changes in cells previously present; thus, the cyst or tumour does not "arise like Minerva, fully panoplied, from the brow of Jove", but develops by gradual differentiation of proliferating cells in the same manner as is seen in the formation of normal tissues or organs. In a cyst, for example, there first appears a simple epithelium which may be in part ciliated; this may become pseudo-stratified or stratified (the former may be ciliated and the second may show keratin formation). The squamous epithelium may then form a basal-type epithelium with calcifiable homogeneous secretion. Lymphocytic accumulation and cartilage formation occur and, in areas of excessive keratin formation, cholesterol accumulation may be found. When all these various tissues and material are found together, the structure becomes one of considerable macroscopical and histological complexity. The close relation of such complex tumours and cysts to simple ones is thus clear, and it is unnecessary to regard the essential progenitor of such structures as a "totipotent" cell or a cell of some special kind. The complex cyst or tumour is merely a variant of that which, because it closely resembles the tissues commonly observed in the part, is usually regarded as simple.

#### Cystosarcoma Phyllodes of the Breast.

NORMAN TREVEES AND DOUGLAS A. SUNDERLAND (*Cancer*, November, 1951) analyse the gross and microscopic pathological findings and various clinical features in 77 cases of *cystosarcoma phyllodes*. They classify 41 cases as benign, 18 as malignant, and 18 as borderline. They state that nine of the malignant tumours have metastasized, and in eight instances the metastasis caused the death of the patient. With two exceptions, all malignant tumours removed initially by local excision or simple mastectomy

have recurred or metastasized. Therefore, radical mastectomy is recommended as the initial treatment in all malignant cases. From the evidence derived from this study, it is concluded that *cystosarcoma phyllodes* may arise in preexisting fibroadenomata or may occur primarily, but no conclusion can be drawn as to whether a tumour may be malignant from inception. In its malignant form, this tumour looks and behaves like a fibrosarcoma and metastasizes primarily by the blood-stream. The earliest microscopic indication of malignant change is focal subepithelial stromal cellularity and anaplasia. The occurrence of bizarre giant cells in an otherwise benign-appearing stroma is not considered at present to indicate malignant transformation. The clinical course and pathological features in 12 malignant cases are presented in brief detail.

#### Myxedema.

DOUGLAS B. BREWER (*The Journal of Pathology and Bacteriology*, July, 1951) reports the post-mortem examination in a virtually untreated case of myxedema. Histochemical studies were made of the mucoid infiltrations of the skin, tongue and myocardium. It was concluded that the infiltration in the tongue was probably a mixture of mucoproteins containing hyaluronic acid and chondroitin sulphuric acid, whereas the infiltrations of the myocardium consisted of a histochemically distinct mucoprotein. The relation of the mucoid infiltrations to the increased interstitial fluid found in myxedema is discussed and the possibility is suggested of the binding of water in the form of a hydrophilic suspensoid by the mucoprotein. The pathology of "myxedema heart" and its relation to the so-called basophilic degeneration of the myocardium is discussed. The findings in the other organs are briefly considered.

#### Infarction of the Brain without Thrombosis.

SAMUEL P. HICKS AND SHIELDS WARREN (*A.M.A. Archives of Pathology*, November, 1951) analyse a series of 100 cases of fatal cerebral infarction with autopsy. Emphasis is placed on the pathological physiology involved in the non-thrombotic cases. The series is compared with a similar series of cases of cerebral haemorrhage previously reported. The authors state that in 50 of the 100 cases of infarction there was no mechanical occlusion of cerebral vessels by thrombosis, embolism or arteriosclerosis, and thus some other explanation is required for the infarction. The factors possibly responsible, such as cerebral arterial spasm, systemic circulatory failure, severe arteriosclerosis and vascular hypertension, are examined. It is emphasized that virtually all forms of apoplexy (exclusive of that due to aneurysm), whether chiefly haemorrhagic or predominantly infarctive, have a common basis in local cerebral ischaemia. In most non-thrombotic cases this is explained by local reduction of blood flow, which, on pathological and clinical bases, is best attributed to vasoconstriction (spasm). In only a few cases could systemic circulatory failure (shock, heart failure) coupled with severe cerebral arteriosclerosis be implicated as a primary cause of the stroke. The complicating role of

cerebral oedema is discussed and the suggestion made that sodium retention in heart failure and the hypertensive state may often have been an aggravating factor. It is concluded that apoplexy is an ischaemic disease of the brain most often directly caused by cerebral vasospasm, less often by thrombosis, and least often by systemic circulatory failure, embolism and arteriosclerosis.

#### The Arachnoid Granulation and the Development of Meningioma.

L. WOLMAN (*A.M.A. Archives of Pathology*, January, 1952) presents evidence that meningiomata take origin in cells of the various types found in the arachnoid villus or in the arachnoid cell clusters in the outer layer of the arachnoid. This evidence is based on the similarity of morphological details and of arrangement between cells of meningiomata and cells of arachnoid villi, and on the correlation between the location of the villi and the favoured sites of origin of these tumours. The author states that in every situation where meningiomata have been described, either arachnoid villi or nests of arachnoid cap cells have been demonstrated. This is not surprising when it is realized how ubiquitous these anatomical structures are. Both meningiomata and arachnoid granulations vary greatly in size. The latter range from microscopic cell nests to hypertrophied granulations as large as the smaller meningiomata. As a result, in some situations it is impossible to be certain whether one is dealing with a true tumour or with an hypertrophied granulation. This is particularly so in the parasagittal region and around the pituitary fossa. In such cases the presence of symptoms is helpful, but if these are absent, size and pressure effects may be the only deciding points in favour of tumour rather than granulation, when a small nodule is found at autopsy.

#### Unrecognized Pituitary Necrosis (Sheehan's Syndrome).

S. L. ISRAEL AND A. S. CONSTON (*The Journal of the American Medical Association*, January 19, 1952) state that the pituitary necrosis which may follow severe post-partum haemorrhage (Sheehan's syndrome) varies in degree. If it is massive, the resultant symptoms are likely to be those of an anterior hypophysectomy, expressing deficiency of the lactogenic, gonadotrophic, adrenotrophic, thyrotrophic and growth hormones. If it is moderate, its presence may be obscured by the patient's ability to lead an apparently normal life, including both menstrual and reproductive functions. Under such circumstances, the masked pituitary necrosis would not interfere with ordinary activity, but might result in failure of the hypophysis to sustain the individual through a period of physical stress. This thesis is exemplified by the history of a juvenile diabetic who suffered a severe post-partum haemorrhage at the conclusion of a fourth pregnancy, and who succumbed suddenly at the onset of a planned Caesarean section at the termination of her fifth pregnancy because of a massive, previously undetected, fibrotic lesion of the anterior part of the hypophysis. In a review of the patient's history after the post-mortem examination, it was learned that some signs of pituitary deficiency had developed following the



post-partum hæmorrhage, but that they had been misinterpreted. The importance is emphasized of attempting to identify the presence of pituitary necrosis in all women who recover from severe post-partum hæmorrhage, and an outline is presented of the required endocrinological investigations. The authors state that such patients should be shielded from any stress which might necessitate an immediate hypophyseal response with release of corticotropin.

#### Alveolar Soft-Part Sarcoma.

W. M. CHRISTOPHER, F. W. FOOTE AND F. W. STEWART (*Cancer*, January, 1952) describe a distinctive soft-part sarcoma, for which the non-committal term "alveolar soft-part sarcoma" is used. They briefly discuss twelve examples. The recommendation that these tumours should not be lumped into the classification of rhabdomyosarcoma or granular-cell myoblastoma is based on both a unique histological structure that fails to recapitulate in any manner these other tumours and the divergent natural history of the respective tumours. In the twelve cases described, five patients developed metastases and four have since died. Five have remained well over a period of from five to fifteen years, and two have an insufficient post-operative period for any conclusion to be reached. The histological recognition is stressed and the histogenesis is briefly discussed.

#### MORPHOLOGY.

##### The Arteries of the Pancreas.

R. T. WOODBURN and L. L. OLSEN (*The Anatomical Record*, October, 1951) state that they undertook the present study in response to the very considerable inadequacy in the description of the pancreatic blood supply in anatomical text-books. It was especially necessary as surgical operative procedures may depend in part on a knowledge of specific vessels reaching the gland. This study of 150 dissections provides the following information. There is considerable regularity in the pattern of arterial blood supply to the pancreas. Two arterial arcades supply the duodenum and head of the pancreas. The anterior arcade is formed by the constant anterior superior pancreaticoduodenal artery from the gastroduodenal artery anastomosing with the almost constant anterior inferior pancreaticoduodenal artery from the superior mesenteric system. The posterior arcade is contributed to from above by the posterior superior pancreaticoduodenal artery, a proximal branch of the gastroduodenal artery. This arcade is completed by an almost constantly occurring posterior inferior pancreaticoduodenal artery arising in over 90% of cases from the superior mesenteric system. The inferior pancreaticoduodenal vessels are much more variable in the detail of their origin than the superior vessels. A dorsal pancreatic artery occurs in 90% of cases. It exhibits a typical course and pattern of branches, but arises variously from the splenic, the celiac, the superior mesenteric, or the hepatic artery. Its right branch crosses the head of the pancreas to form a pre-pancreatic arterial arcade (incidence 93.3%) by means of an anastomosis

with the left branch of the anterior superior pancreaticoduodenal artery. The constant inferior pancreatic artery is found along the dorso-inferior border of the pancreas. It is in the majority of cases (84%) the left branch of the dorsal pancreatic artery. The pancreatic magna artery is a superior pancreatic branch of the splenic artery entering the body of the pancreas at the junction of its middle and left thirds and has an occurrence of 64.7%. Caudal pancreatic arteries reach the tail from predominantly the splenic artery or its left gastro-epiploic branch and occur in 78.7% of cases in this series.

##### Sequences of Prenatal Appearance of Ossification Centres in Man.

C. R. NOBACK and G. G. ROBERTSON (*The American Journal of Anatomy*, July, 1951) state that the published data on the time of onset of ossification of the prenatal bones are not only scant but also in disagreement. Only the approximate time of appearance of many of the prenatal ossification centres is known, and accurate information on the degree of variation in the time of appearance of specific centres is lacking. In the present study the time of ossification of the bones appearing during the first five prenatal months is based on an examination of 136 cleared and alizarin red stained human embryos. Tables are included which correlate these data with all the previously recorded observations made on human embryos which have been (i) cleared or (ii) cleared and stained with alizarin red or (iii) serially sectioned. The variation in the time of appearance of each primary ossification centre observed is indicated in the tables. In general, the ossification centres in each developing embryo appear in a definite and orderly sequence, and these are given in detail. Thirty-four of 81 embryos ranging in crown-rump length from 57 to 235 millimetres have seventh cervical ribs. Of these, 24 have paired cervical ribs.

##### The Sesamoid Bones of the Hand.

J. JOSEPH (*Journal of Anatomy*, July, 1951) reports that the incidence of a bilateral interphalangeal sesamoid of the thumb is 74% in a sample population of 174 males and 135 females aged eighteen to sixty-three years. This sesamoid appears in females between the ages of eleven and fifteen years and in males between the ages of thirteen and eighteen years. This sesamoid is in the capsule of the joint and not in the tendon of *flexor pollicis longus*. It always articulates with the anterior part of the proximal surface of the distal phalanx. The range of flexion and extension at the interphalangeal joints which have a sesamoid is not significantly different from the range of movements in joints without a sesamoid. The sesamoids at the metacarpo-phalangeal joint of the thumb are found in 100% of adults, and appear in females between the ages of ten and twelve years and in males between the ages of twelve and fifteen years. The metacarpo-phalangeal sesamoids of the thumb always appear before the interphalangeal sesamoid. There are three main groups of the other metacarpo-phalangeal sesamoids of the hand: (a) those with none, (b) those with bilateral fifth metacarpo-phalangeal sesamoids, (c) those with

both bilateral second and bilateral fifth metacarpo-phalangeal sesamoids. These sesamoids appear at the age of fifteen to eighteen years in males and twelve to fifteen years in females. Investigation of a group of Indians and Africans does not suggest any racial differences in the incidence of the sesamoids of the hand. The thumb epiphyses fuse earlier than, and in different order from, the epiphyses of the rest of the hand. The thumb epiphyses fuse as a rule between the ages of fifteen and seventeen years in males and thirteen and fifteen years in females. A distal epiphysis of the metacarpal of the thumb occurs fairly frequently.

##### Anatomical Relationship Predisposing to Lumbo-Sacral Fusion.

F. P. THIEME (*American Journal of Physical Anthropology*, June, 1951) has investigated the question of whether lumbo-sacral fusion is a functional adaptation to the mechanical requirements of erect posture, and has examined in detail the anatomical relationship which apparently is the weakness predisposing to anomalous lumbo-sacral fusion. He states that whatever may be the evolutionary position of lumbar curvature, it is a very important anatomical fact. This curve, introduced in a spine inherited from four-legged mammalian ancestors, has caused mechanical strains poorly met by the anatomical structure. No new muscles or ligaments have been acquired by man to meet the new functional requirements resulting from upright posture. However, important changes have occurred in the form of the skeleton, both in the spine and elsewhere. Lumbo-sacral fusions are an anomalous development in the life span of some individuals and are quite common in adult populations. The frequency is, in general, over 5%, as seen in a variety of reported samples, and it increases with the mean age of the subjects. The author describes the method he employs for determining in individual cases the existence of a predisposition to normal lumbo-sacral fusion.

##### Lymphocytes and Lymphoid Tissue in the Human Pituitary.

W. M. SHANKLIN (*The Anatomical Record*, October, 1951) reports that areas of lymphocytes and lymphoid tissue were found in 43 of 100 human pituitaries examined. None were found in 26 specimens from subjects aged less than 35 years. The cases with positive findings were fairly evenly distributed over the remaining age groups. The areas occurred in the pituitaries of 35.7% of female subjects and 71.7% of male subjects. They were found most frequently in or near the *pars intermedia* associated with epithelium. None were observed in the *pars anterior*. The areas were divided into two groups. Those in Group I included lymphocytes scattered among collagenous fibres. Those in Group II included typical lymphoid tissue with a reticulum, and resembled lymphoid follicles; they may have germinal centres. Of the areas described 76 were classified as being in Group I and 29 as in Group II. The author states that these studies suggest that the areas are a normal finding and that their presence in the pituitary is to be explained on an embryological basis.



## Special Articles for the Clinician.

(CONTRIBUTED BY REQUEST.)

XXVIII.

### THE ANÆMIAS: TREATMENT.

THE definitive treatment of any person suffering from anæmia is dependent on an accurate assessment of the type of anæmia which is present, and its cause. Until a sample of the peripheral blood has been taken for detailed examination it is unjustifiable to prescribe combinations of liver, iron and vitamins indiscriminately or to try the effects of any one of these in adequate doses. The reasons for this are:

1. Specific remedies are necessary for megaloblastic and for hypochromic microcytic anæmia.
2. Liver preparations even in inadequate doses may cause reversion of a megaloblastic marrow to a normoblastic type after very few days.
3. Pernicious anæmia may simulate acute hæmolytic anæmia, nutritional anæmia, or the pernicious anæmia of pregnancy, and treatment differs.
4. Hæmolytic anæmia with normoblastic marrow may present as a macrocytic anæmia resembling pernicious anæmia.
5. The duration of treatment varies and a patient with pernicious anæmia must continue treatment for life.
6. Inadequate or incorrect treatment of pernicious anæmia may predispose to the occurrence of a rapidly progressive subacute combined degeneration of the spinal cord.
7. The only effective treatment may be surgical, for example, splenectomy in the anæmia due to hypersplenism.

Israel's classification of the anæmias into four groups, based on morbid erythropoiesis, provides a rational basis for treatment according as the bone marrow shows failure of maturation of proerythroblasts (megaloblastic marrow), failure of maturation of normoblasts which are deformed and poorly hæmoglobinized, hyperplasia with normal maturation of normoblasts, or failure of erythropoiesis. Application of this classification does not mean that the marrow should be examined in every case prior to commencing treatment; but if a reasonably accurate diagnosis cannot be made from the morphology of the peripheral blood, such an examination is necessary before the evidence is destroyed or distorted, and in every case in which the anticipated response to treatment does not occur.

The plan of action for any patient with anæmia should be as follows:

1. Institute general measures designed to prevent progress of the disease, to relieve distress and to prevent or control infection.
2. Examine the peripheral blood.
3. Give a transfusion with fresh whole blood or packed cells if the anæmia is severe.
4. Investigate as indicated—proctoscopy, sigmoidoscopy, test meal, gastric biopsy, marrow puncture or biopsy, Coomb's test, corpuscular fragility test, opaque meal and other radiographic examinations *et cetera*.
5. Apply appropriate treatment directed to removal of the cause of the anæmia and correction of the deficiencies.

#### General Management.

The general management of the patient will depend to some extent on the severity of the anæmia, but whenever the anæmia is severe he must be at rest in bed; and rest is preferable when the hæmoglobin value is below 60% (8.4 grammes). The diet must be appetizing, readily assimilable, easy to take, and high in caloric, protein and vitamin content. Symptomatic treatment may be necessary to control alimentary disturbances; antibiotics such as penicillin must be used if sepsis is present; bleeding must be arrested if possible; and no possibly noxious drugs such as benzene ring compounds, sulphonamides *et cetera* are permissible. Appropriate sedative and analgesic drugs may be given, for example, bromides, codein and opium derivatives. Myxoedema or other associated disease, such as congestive cardiac failure, must be treated.

Whenever the anæmia is severe, that is, when the erythrocytes number one million per cubic millimetre or when the hæmoglobin value is less than 30% (4.2 grammes), blood

transfusion after careful typing and cross-typing is desirable. Packed cells are preferred to whole blood (which should be freshly collected) and expert attention is necessary to avoid cardiac embarrassment. No attempt is made to restore the blood to normal levels at this first transfusion designed to tide the patient over his initial hazards, to improve cardiac efficiency and to overcome some of the effects of anæmia. In pernicious anæmia it is debatable whether the transfusion is essential even in such severe anæmia because of the rapid response to potent liver extract or vitamin B<sub>12</sub>, and because it masks to some extent the reticulocyte response; but the consensus of opinion favours transfusion.

#### Anæmias with Megaloblastic Marrow.

##### Pernicious Anæmia.

Pernicious anæmia is the commonest group of anæmia with megaloblastic marrow, and the best and most economical method of treatment is the parenteral administration of potent liver extract or vitamin B<sub>12</sub>. Wilkinson is a protagonist of the efficiency of hog's stomach given orally, but few patients take it well. Hog's stomach ("Ventriculin" 1.5 ounces daily), proteolysed liver ("Hepamine" 1.5 ounces daily), whole liver (500 grammes daily) and oral extracts of liver are to be preferred only when attendance for injections is not practicable or when the patient has an unalterable objection to them; and these preparations are more expensive than those given by injection. Dosage will vary with individual preferences, but it is essential that the preparation be potent, and for this reason physicians tend to use only the products of one or two reliable firms.

A scheme based on the severity of the anæmia may be used.

1. *The Acutely Ill Patient.*—In these circumstances the erythrocytes number one and a half million or less per cubic millimetre, and the hæmoglobin value is 30% (4.2 grammes) or less. Intravenous therapy may be used (for example, "Hepatex" (P.A.F.) 5.0 millilitres), but the response is very little better than with intramuscular injection which in any case is desirable simultaneously. A concentrated liver extract such as "Examen", "Anahamin", "Neo-Hepatex", "Hepastab", "Campolon Forte" *et cetera* should be given intramuscularly in doses of 2.0 millilitres every day for from four to six days and then every week till the blood returns to normal. Vitamin B<sub>12</sub> 30 microgrammes daily, injected intramuscularly for from four to six days and then every week gives comparable though slightly higher dosage and equally good results, and it is to be preferred whenever there is a history of allergy or a local or febrile reaction to a liver extract.

2. *The Moderately Ill Patient.*—Here the erythrocytes number one and a half to three millions per cubic millimetre and the hæmoglobin value is 30% to 60% (4.2 to 8.4 grammes). Concentrated liver extract ("Examen" *et cetera*) should be given in doses of 2.0 millilitres by daily intramuscular injection for four days and then every week. Vitamin B<sub>12</sub> may be used similarly.

3. *The Anæmic Patient who is Not Very Ill.*—Daily injections as above are given for two to three days or a single injection of 4.0 to 6.0 millilitres or 60 to 90 microgrammes, followed by weekly injections.

4. *Maintenance.*—Weekly injections must be continued until the blood picture has returned to normal, after which the injections must be given in such doses and at such intervals not exceeding one month as will maintain the blood at or slightly above the average normal figures (erythrocytes at least five million per cubic millimetre and hæmoglobin level at least fourteen grammes). The dose must be determined for each patient and usually is in the vicinity of "Examen" 2.0 millilitres every second, third or fourth week, or vitamin B<sub>12</sub> 30 microgrammes per month.

It has been estimated that one microgramme of vitamin B<sub>12</sub> is the daily requirement for maintenance of normality and that it is the equivalent of one United States Pharmacopœia unit. Some preparations are standardized in terms of United States Pharmacopœia units and others by their B<sub>12</sub> content as estimated by microbiological assay; but reliability of the standardization is a prerequisite if it is to be used as a guide, and whatever method of treatment is used it must be checked by examination of the peripheral blood at intervals of not more than three months.

In elderly people and whenever neurological signs or symptoms are present, it is imperative that treatment be energetic, that full doses be used for acutely ill patients, and that the standard of maintenance be very strictly observed.

The dangers of parenteral injection are the accidental intravenous injection of the extract, abscess formation and allergy. The first two are avoidable with reasonable care, and if any local or febrile reaction suggestive of sensitization occurs with liver extract, a change to vitamin B<sub>12</sub> or another preparation, or the administration of an antihistamine preparation prior to the injection and for twenty-four hours after it will usually obviate further trouble.

A reticulocyte response proportional to the degree of anaemia must be observed as an indication of the efficacy of treatment, and is usually maximum between the sixth and tenth days; but it must be remembered that toxic substances can cause a reticulocytosis, and unless there is an associated improvement in the red cell count, the treatment is not being effective.

Administration of iron is not necessary in the early stages of treatment, but if hypochromia develops iron should be given orally in doses described below. Hydrochloric acid is not given as a routine measure, but some patients benefit from taking it with or after meals.

Folic acid should never be given to any patient suffering from pernicious anaemia because of the danger of precipitating a rapidly progressive subacute combined degeneration of the cord against which the simultaneous administration of liver extract is not a safeguard.

Oral administration of vitamin B<sub>12</sub> is at present a wasteful and unsatisfactory form of treatment.

#### Nutritional Macrocytic Anaemia and Pernicious Anaemia of Pregnancy.

Nutritional macrocytic anaemia and pernicious anaemia of pregnancy may respond to the above treatment for pernicious anaemia, but folic acid given orally in doses of 10 to 20 milligrammes every day produces the best result. Larger initial doses are often preferred.

#### Achrestic Anaemia.

Achrestic anaemia fails to respond to an adequate degree to any of the above methods of treatment; but while blood transfusion, oft repeated, is the only effective means of controlling the anaemia, it is desirable to continue the administration of potent liver extract to ensure that adequate supplies are available and because of the apparent slight responses which are sometimes seen.

#### Anaemias with Defective Maturation of Normoblasts:

##### Anaemias due to Deficiency of Iron.

Microcytic hypochromic anaemia results from absolute or relative deficiency of intake or absorption of iron and responds, with reticulocytosis, to the administration of adequate doses of iron. A low serum content of iron is a positive indication for iron therapy. It is unnecessary to give hydrochloric acid in order to obtain the effect. The general measures referred to above are necessary, because it must be realized that many of the symptoms and signs in the disease are due to other associated deficiencies in the diet, for example, deficiency of riboflavin, ascorbic acid, thiamine, nicotinic acid and protein.

Iron is usually effective orally, and the simplest and cheapest preparation is ferrous sulphate, which may be given as three or five grain tablets, crushed, after food, or in the form of more elegant and expensive capsules, emulsions, biphosphates *et cetera*. The minimum effective dose is nine grains daily, and, if tolerated, it is preferable to give 12 to 15 grains daily. If this preparation causes gastro-intestinal upset such as nausea, vomiting or diarrhoea, another preparation of the more elegant type suitably prepared to prevent the liberation of ferrous sulphate in the stomach may be used, or one of the scale preparations, for example, *Ferri et Ammonii Citras* in doses of 60 to 120 grains daily. This last preparation is readily soluble in water and 30 grains in one drachm may be dispensed. Its minimum effective dose is 60 grains daily, and 90 to 120 grains are preferred. The dose of Bland's pill is not less than 45 grains daily (nine pills). Colloidal iron in the form of "Colliron" is effective in doses of three drachms daily and is well tolerated.

The above doses apply for adults, and it is claimed that the simultaneous administration of 500 milligrammes of ascorbic acid facilitates absorption. Large doses of iron are more prone to cause loose bowel actions than to cause or aggravate constipation, and diarrhoea usually responds well to a reduction in dosage or a change of preparation.

If there is not a satisfactory response to oral ingestion of iron, owing to defective absorption as shown by low serum iron concentration, its intravenous use is advisable. "Ferrivenin" (Benger) is a satisfactory preparation. The dose required for restoration to a normal haemoglobin level is estimated as 24.5 milligrammes for each 1% deficiency in haemoglobin, and 50% more than this should be given to overcome the general depletion of iron. The intravenous dose commences with 25 milligrammes in a 2% solution followed on consecutive days by 50 milligrammes, 100 milligrammes and 200 milligrammes if well tolerated; and thereafter 200 milligrammes are injected each second day until the total requirement has been given.

There is no preparation suitable for intramuscular injection available at present.

#### Anaemias with Normoblastic Marrow, often with Hyperplasia.

The commonest form of anaemia is normocytic hypochromic anaemia in which haemoglobinization is defective because of the necessity for rapid active replacement of erythrocytes due to acute or chronic loss of blood or haemolysis. Commonly, however, the anaemia is normocytic and normochromic and some degree of macrocytosis may even be present, especially in "blast" crises. Leukaemia, malignant disease, malaria, sepsis, purpura, cirrhosis of the liver and chronic nephritis may present with this type of anaemia.

The first essential in treatment (excepting for transfusion if the anaemia is severe) is to determine the cause and if possible to control or remove it. Iron is administered as described above, but will rarely have a satisfactory effect unless the cause of the anaemia can be eliminated.

In the anaemias due to haemolysis, transfusions are life saving whilst investigations are in progress. Splenectomy is indicated in familial acholuric jaundice, in some cases of acquired hemolytic anaemia, in hemolytic anaemia secondary to splenomegaly in Hodgkin's disease, tuberculosis, lymphatic leukaemia, sarcoidosis or Gaucher's disease, in cases of thrombocytopenic purpura of the splenic type, and in pancytopenia and neutropenia of splenic origin. It is of interest that Davidson *et alii* have reported beneficial effects from the use of ACTH in acquired hemolytic anaemia.

#### Anaemias with Hypoplastic or Aplastic Bone Marrow.

The peripheral blood picture is usually that of normocytic normochromic anaemia and rarely is there any macrocytosis. The only effective form of treatment is blood transfusion, preferably with packed cells, and every effort must be made to bring the blood count to a normal figure and to repeat transfusions before the count has fallen below 60% of normal. Removal from exogenous toxins such as benzol and the institution of the general measures already outlined are, of course, essential. There is ample justification for the continuation of transfusions when the aplasia or hypoplasia of the marrow is apparently toxic in origin because spontaneous recovery may occur; but its continuation is futile when the anaemia is due to carcinoma, or the terminal stages of leukaemia. The administration of liver extract, or vitamin B<sub>12</sub>, folic acid, iron and vitamins is justifiable but usually quite ineffective.

Splenectomy is absolutely contraindicated when myelofibrosis is the cause of the anaemia, but is desirable for the hypoplasia in the so-called splenic anaemia with neutropenia and splenic enlargement.

To sum up, the slogan in anaemia should be diagnosis before treatment, and treatment must be rational, based on an understanding of physiology and pathology, and maintained in accordance with the aetiology of the anaemia.

GEOFFREY A. PENNINGTON,  
Melbourne.

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## British Medical Association News.

### SCIENTIFIC.

A MEETING of the New South Wales Branch of the British Medical Association was held at the Rachel Forster Hospital for Women and Children, Redfern, New South Wales, on March 20, 1952. The meeting took the form of a series of clinical demonstrations by members of the honorary medical and surgical staff of the hospital. Part of this report appeared in the issue of July 5, 1952.

#### Crohn's Disease of the Colon.

DR. KATHLEEN CUNNINGHAM showed a married woman, aged fifty-seven years, who had been admitted to hospital on January 15, 1952, under the care of Dr. Helen Taylor. Her history was one of diarrhoea, swollen painful legs and ulcerated mouth for three months. She had been quite well until August, 1951, when she had had an attack of colicky pain in the abdomen, nausea and shivering, lasting for two days. She had consulted a doctor, who found a mass in the right iliac fossa. She was admitted to hospital and given penicillin. Dr. V. J. Kinsella examined her and suggested the presence of residual infection at the site of an old appendicectomy. A barium enema examination in October, 1951 (Dr. Vote) showed no abnormality. The mass had subsided by the end of October. Early in November she began to have colicky pains and diarrhoea, passing three or four watery stools per day. No blood or mucus was noted by the patient. Swelling of the ankles had been present for six weeks, and also pains in the shoulder joints, wrists and right knee. Investigation of her past history revealed that she had undergone appendicectomy years before and cure of a fistula-in-ano at the age of five years. She had had jaundice when a child.

Examination of the patient revealed conjunctivitis, an ulcerated mouth, tenderness over the lower part of the abdomen, oedema of the ankles and an elevated temperature (of a high swinging type). Leucocytosis was present (13,500 cells per cubic millimetre) with many band forms. The results of blood culture and of Widal and Wassermann tests were negative. Repeated culture of stools grew colon bacilli only. At sigmoidoscopic examination blood and mucus were seen in the colon, but only two small ulcers, one of which was certainly traumatic. The sigmoidoscope could not be passed beyond 16 cubic millimetres; at that level the bowel could not be distended by air, but no abnormal mucous membrane was seen. Barium enema examination was attempted, but the patient was unable to retain the enema. A further sigmoidoscopic examination, this time by Dr. Margery Scott-Young, revealed similar findings. The temperature did not respond to antibiotics or sulphonamides. The patient's condition deteriorated, and bowel actions occurred four-hourly, being accompanied by intense pain both before and after. The patient was free from pain for only one hour in four. Tenderness developed increasingly in the right iliac fossa. No guarding or evidence of peritonitis was present. It was decided to explore the abdomen. At laparotomy on March 13, through a left paramedian incision, the caecum was found to contain a thickened area about five by four centimetres extending from the base of the caecum to the ilio-caecal valve and for about one inch into the terminal part of the ileum. This was considered to have the clinical appearance of Crohn's disease. The ascending colon, the transverse colon and the rest of the small intestine appeared normal. From the splenic flexure down to the beginning of the sigmoid colon, the bowel was intensely inflamed, thickened, plum-coloured, surrounded by recent omental adhesions and very friable. The visceral peritoneum of this segment of bowel was very inflamed, but the general parietal and visceral peritoneum appeared relatively uninvolved. Resection of the colon was carried out from the mid-transverse to the mid-sigmoid region. It was decided not to perform a primary intra-peritoneal anastomosis, in view of the apparent inadequacy of sulphonamides and antibiotics. Therefore the clamped ends of the colon were brought out through the upper end of the wound and exteriorized, the two limbs of the anastomosis having been sutured together laterally. It was intended to apply a spur clamp and complete the operation after the manner of Paul Mikulicz. The patient's condition had improved greatly since operation. The temperature had subsided, and the pain had eased. The blood count result was satisfactory.

#### Recurrent Ganglioneuroma.

Dr. Cunningham's second patient, a married woman, aged twenty-five years, had suffered from a knife-like pain in the left side for seven or eight months. She had no trouble with defaecation. Her two children were aged five and four years. Her menstrual periods were irregular, lasting for six or seven days and occurring at intervals of from twenty-one to forty-two days. Vaginal examination revealed that the cervix was lacerated and the uterus anterior. A mass in the posterior fornix was rounded and moderately firm and tender. Rectal examination showed that the mass was behind the rectal mucosa. X-ray examination revealed no bony abnormality in the sacrum, but there appeared to be a shadow anterior to the lower part of the sacrum and coccyx. At operation on November 8, 1951, an incision was made in the gluteal fold and the coccyx and lower segment of the sacrum were removed. A mass measuring about two and one-half inches by one and three-quarter inches was removed; it had the consistency of a fibroma or firm lipoma. The patient made an uninterrupted recovery. The pathologist described the mass as an oval tumour, the size of a small egg, which was smooth externally, but on section appeared to have fibrous whorls. At one pole there was an irregular piece of tissue. Microscopically the tumour was a ganglioneuroma. The main mass of tissue consisted of bundles of non-medullated nerve fibres accompanied by Schwann cells. Amongst these, usually in clumps but sometimes isolated, were adult nerve cells having prominent nuclei and nucleoli. Some contained dark granular material at the periphery of cells. These cells closely resembled the cells of sympathetic ganglia, from which presumably the tumour arose. It was a well differentiated ganglioneuroma.

The patient reported to the hospital again on February 8 complaining of pain across the lower end of the back and the lower part of the abdomen. Rectal examination revealed another smooth mobile mass palpable behind the rectum, measuring about three by two by one centimetre and tender. The patient also had an adenoma of the isthmus of the thyroid, with widening of the palpebral fissure. The basal metabolic rate was -14%. Presacral pneumography was performed on March 19. All the air was confined in the presacral space, there probably being adhesions at the level of the sacral promontory, due to the previous operation. A rounded shadow was seen outlined by air; it was probably a recurrence of the previous tumour. The patient was to be readmitted to hospital for operation.

#### Melanoma of Left Leg.

DR. MARGERY SCOTT-YOUNG showed a married woman, aged forty-eight years, who had first presented on July 30, 1951, with a traumatic ulcer of three weeks' duration, situated in the lower third of the left leg antero-medially. Close to the periphery of the ulcer was a pigmented mole, which, the patient stated, had been present about ten years. The mole had increased in size since the injury to the leg. By September 4 the ulcer was well healed. The patient was admitted to hospital on November 6. On November 8 the mole, which overlaid the subcutaneous surface of the tibia in the lower portion of the leg, was widely excised, and the resected area carried down to the periosteum. A split-skin graft was applied cuff-fashion to the area. The exact nature of the lesion was not certain at the time, owing to a heavy incrustation of its surface. The pathologist reported that the lesion was a raised dark-coloured tumour, measuring about one by one centimetre, the cut surface showing a transparent white mass, which appeared to be intra-epidermal. The lesion, which had a scab superficially, was a melanoma. There were thinning and "fraying" of the epidermis with areas of hyperkeratosis. The subcutaneous tissue and the dermis were infiltrated by blue-staining, large nevus cells, showing irregularity of shape and staining. Some parts were non-pigmented, and in others there were moderate deposits of brown pigment in the cells and lying loose in the connective tissue. Near the deep border of the tissue was a deposit of malignant tissue with highly irregular cells containing much vacuolation of the cytoplasm and large deposits of pigment. The diagnosis was malignant melanoma.

On November 22 a block dissection of the whole of the inguinal lymph glands was made together with a block dissection of the lymphatics running with the long saphenous vein from the vicinity of the lesion to the groin. Dissection was carried down to the deep fascia, which was resected in a two inch wide strip the full length of the wound. The femoral triangle was cleared of all except the femoral sheath and its contents and branches of the femoral nerve. Three small tubes were used for drainage, one in the groin, one



in the thigh, the third below the knee. The wound was approximated with interrupted "Nylon" sutures. On November 26 there was discoloration of a small area of flap in the groin (Dr. Scott-Young mentioned that Grey Turner warned against prejudice to the blood supply in the cutting of such a flap). On November 28 there was a purulent discharge from the upper portion of the wound. This was shown to be due to a *Staphylococcus aureus* insensitive to penicillin, and the wound was irrigated under the flaps by means of a fine catheter with "Monacrin" solution 1:1000. Infra-red irradiation was also carried out at four-hourly intervals. That treatment resulted in the control of the infection and ultimate wound healing, except for the small area in the groin where a portion of tissue had sloughed. On January 9, 1952, a skin graft (split skin) was applied to the groin region and on January 27 the patient was discharged from hospital. On February 6 she was examined in the out-patient department and advised to wear a full-length elastic stocking. On March 5 the wound was excellent and the leg much stronger.

#### Adenocarcinoma Arising in Fundal Polypus.

DR. GWEN GERRARD showed a married woman, aged sixty-two years, who had been admitted to the Rachel Forster Hospital on October 28, 1951. She then complained of bleeding per vaginam occurring every four weeks for nine months and lasting four or five days, difficulty in micturition twelve months previously, but not at the time of admission, and recurrent ventral hernia for fifteen years. She had had her menopause twelve years before. Her reproductive history was normal. She had no weight loss. She had been receiving treatment for "heart trouble". On examination of the patient, a large ventral hernia was found, and in the abdomen a hard mass extending from the pelvis into the left hypochondrium. Vaginal examination was difficult and inconclusive as the patient was extremely obese. On November 13 laparotomy was performed, and an enlarged uterus with a fibroid tumour on the anterior wall was found. There was a large left ovarian cyst. The patient had dilatation and curettage, left oophorectomy and removal of the cyst and repair of the ventral hernia. The cyst proved innocent, but the endometrial scrapings showed likely evidence of adenocarcinoma arising in the mucous glands of the endocervical canal. The patient was allowed to convalesce and returned for a further curettage of the uterus on December 31. The pathologist reported that the material obtained was adenocarcinoma of a fairly well differentiated type. On February 12, 1952, total hysterectomy and right salpingo-oophorectomy were performed. At operation the uterus proved to be large and bulky, showing no gross malignant change, but with a polypus at the fundus. The pathologist reported that the endometrium was normal, but that the sections of the fundal polypus showed localized malignant changes, and there was no doubt that the previous material, on which the diagnosis of adenocarcinoma of the uterus was given, had been obtained from this source.

#### Carcinoma of the Cervix, Grade III.

Dr. Gerrard then showed a married woman, aged thirty-five years, who had come to the Rachel Forster Hospital out-patient department in February, 1952, complaining of vaginal haemorrhage since July, 1951, and of a very offensive heavy brown discharge for ten days before the bleeding commenced. This was the termination of a history of slight brown discharge for thirteen years. The reproductive history was normal. The patient had three children, and had had no previous illnesses or operations. Examination of the patient revealed a "frozen" pelvis with a copious blood-stained offensive discharge. A hard rubbery polypoid mass occupied the whole of the cervix.

On March 5 the patient was admitted to hospital. The full history was that the patient had not felt well for the last two years. She had been tired and lacking in energy. Since the birth of the first child thirteen years previously she had had a constant slight brown discharge between menstrual periods, which up to July, 1951, were normal. About one year before the patient had become much more conscious of the discharge and it had become irritating. In July, 1951, on the way from Australia to Scotland, the discharge became very heavy (the patient "was covered" with it) and extremely offensive. After ten days of heavy discharge the bleeding commenced and had continued since then. It was a slow leak, and the patient could not really tell when the menstrual periods came. At operation on March 6, 1952, dilatation and curettage were almost impossible. Some scrapings were obtained, however, and a diagnosis of "spinal cell carcinoma, originating from the cervix.

and infiltrating upwards into the uterine cavity", was made on the pathologist's report. Radium was inserted and 7000 milligramme-hours were given (30 milligrammes in the cervix and 20 milligrammes in each lateral fornix). At the time of the meeting the patient was waiting review to see if the response to radium warranted a Wertheim operation.

#### Unusual Post-Nasal Polypus.

DR. BRENDA LAWES presented a woman, aged fifty-one years, who had had obstruction to breathing and yellow sputum, mostly in the mornings, for twelve months. She had also post-nasal discharge, sneezing attacks, a nasal voice and frontal headache. A polypus was seen in the post-nasal space, and at operation two large polypi were removed from the post-nasal space. Brisk haemorrhage occurred, requiring a post-nasal pack. The pathologist reported that the masses consisted of essentially chronic granulation tissue covered with more or less normal ciliated epithelium of the nasal cavity. Beneath the epithelium the granulation tissue was showing young capillary loops, with infiltration of lymphocytes, plasma cells and numerous eosinophile leucocytes. Deeper in the tissue mass the capillaries were widely dilated into blood lakes, and the surrounding tissue was oedematous and in some part fibrous. Groups of Bowman's glands were scattered through the tissue. There was no evidence of any tumour formation, innocent or malignant.

#### Congenital Cystic Disease of Lung.

Dr. Lawes also presented a woman, aged seventy-two years, who had been complaining of noises in the right ear for one year. She had had a chronic cough since she was a baby nine months old, when she had measles. She had no breathlessness on exertion. Chest X-ray examination on December 4, 1951, revealed increased markings in both lungs. Behind the heart shadow on the left there was a suggestion of numerous cavities or cysts. This was either advanced bronchiectasis or cystic disease. A lateral skiagram showed a large number of radio-translucent areas of varying size in the lower lobe of the left lung. The appearances suggested that this was probably a congenital cystic condition rather than bronchiectasis. On January 23, 1952, the blood sedimentation rate was 43 millimetres (normal 0 to 20 millimetres). At bronchoscopy on February 21 the trachea was normal and the carina quite sharp. Copious greenish mucopus was present in the left main bronchus. The walls were slightly patulous. There was a large amount of mucoid fluid in the bronchus. A bronchogram revealed no abnormality in the right lung. There was poor filling of the left bronchial tree associated with numerous areas of saccular dilatation and irregularity of the bronchial walls. The appearances suggested that the condition might be due to cystic disease with a number of the cystic areas not filled. No evidence of cysts in other organs had been demonstrated.

#### The Ocular Fundus in Hypertension.

DR. EUNICE WILSON showed a single woman, who had been first examined at the Rachel Forster Hospital in 1948 at the age of forty-five years, when her blood pressure was 200 millimetres of mercury (systolic) and 150 (diastolic). Sedatives were given, but were without effect on the blood pressure. The blood urea content was 30 milligrammes per centum. X-ray examination of the chest showed a heart shadow typical of hypertension. X-ray examination of the kidneys showed no pathological lesion. A centrifuged specimen of urine contained three to five red blood cells per high power field, and a trace of albumin was present. On March 4, 1949, a left thoraco-lumbar sympathectomy was performed by Dr. Gilbert Phillips. After the operation the blood pressure readings fell and then rose again. On July 7 a course of sodium thiocyanate was commenced and continued for six months without improvement. Since then she had been treated by sedatives and recently by venesection. In 1949 the outline of the optic disk was blurred, the veins were engorged, and the arteries were narrow with nipping of the veins at the arterio-venous crossings. The fundi were now substantially the same as in 1949.

#### Epilepsy Associated with Congenital Syphilis.

DR. EDITH ANDERSON presented a single woman, aged twenty-nine years, who had been admitted to Broughton Hall in 1945. Her behaviour was then eccentric and her speech slurred. The blood Wassermann reaction was positive. The cerebro-spinal fluid Wassermann reaction was also positive, the colloidal gold test result was represented by the figures 554331000-0, 26 cells were present per cubic millimetre and

the amount of globulin was increased. The patient was treated with malaria, six rigors, and with arsenic injections for eighteen months. Great clinical improvement followed.

In 1951 the patient started to have epileptic fits. There was no aura; the patient lost consciousness immediately and had a typical *grand mal* convulsion. No history was obtained of infantile convulsions or head injuries, nor was there evidence of familial epilepsy. On examination of the patient, the pupils failed to react to light, the knee and ankle jerks were absent, and there was a depression of the bridge of the nose with notching of the lower incisor teeth. She was given a course of bismuth and penicillin. In November, 1951, the blood Wassermann reaction was positive. The cerebrospinal fluid contained numerous red blood cells, but no leucocytes. The protein content was less than 20 milligrammes per 100 millilitres, the Wassermann reaction was positive, and the colloidal gold test result was represented by the figures 1111100000-0. In February, 1952, the following electroencephalogram report was made:

This record is characterised by a gross slow wave dysrhythmia. High voltage paroxysms of 3-4 c.p.s. waves occur frequently both in the resting record and on overbreathing. This is a generally abnormal record similar to those found in idiopathic epilepsy. There are no features to suggest focal pathology.

The epilepsy was controlled by "Dilantin" and "Prominal".

A further bismuth and penicillin course was given in 1952, in the form of "Bisglucol" (May and Baker) half a millilitre three times weekly for four weeks; then, procaine penicillin with 2% aluminium monostearate in oil, 1,800,000 units given intramuscularly on alternate days for 10 doses. Lumbar puncture was performed on March 18. The pressure was 172 millimetres of cerebro-spinal fluid. The fluid was clear and contained 20 milligrammes of protein per 100 millilitres and one lymphocyte per cubic millimetre. The colloidal gold test result was represented by the figures 111110000.

## Medical Societies.

### THE AUSTRALASIAN ASSOCIATION OF PSYCHIATRISTS.

A MEETING of the Australasian Association of Psychiatrists was held at Sydney on October 29 to November 2, 1951, Dr. J. F. WILLIAMS, the President, in the chair.

#### Transference and Countertransference in Psychoanalytical Therapy.

DR. A. PETO read a paper entitled "Transference and Countertransference in Psychoanalytical Therapy". He said that the beginning of psychoanalysis had been delayed for more than a decade because of Breuer's misinterpretation of the famous case of *Fräulein Anna* to which he later drew Freud's attention. Freud repeatedly asked him why he interrupted the treatment and Breuer always evaded the answer. Freud guessed many years later that Breuer had been shocked at the girl's apparent falling in love with him. He had taken this at its face value, not realizing that the patient's tender emotions were aroused by his cathartic treatment itself and were inherent to the treatment.

Freud had discovered the real nature of this problem and its significance for the treatment. He regarded it as the most important part of the technique of cure and recognized at the same time the difficulties it introduced for the therapy.

He was aware that this phenomenon was not peculiar to analytical treatment. Transference—as he called it—might be present in every human tie. In the course of development definite patterns of object-relations were formed. The flexibility of these patterns depended on the mental health of the individual; the more neurotic the personality, the more rigid the patterns.

These patterns were mainly built during the first six years and took their final shape at the end of adolescence. Through them were preserved all stages of development, though in a transformed and sublimated way. Those phases of development that were for some reason or other more important to the individual would, in the adult, colour his attitude. Man's attitude to an object, whether a person or an idea, was

determined by two factors—reality and emotional pattern. The two extremes could be illustrated by the perfectly healthy person whose emotional relations were completely adapted to reality and by those psychotics whose psyche was absolutely detached from reality. These two extremes did not exist. Even the healthiest person was not detached from his past, and even the chronic catatonic who was apparently completely absorbed by his hallucinations took some notice of reality.

Transference was knowingly or unknowingly used in every type of therapy. It was used in its extreme form in hypnosis where the patient's affection was exploited to make him malleable.

The same extreme devotion and allegiance were seen in passionate love and in blind adherence to an influential leader. These passionate attachments could turn abruptly to the opposite extreme of hate. Lovers and admired leaders could be suddenly exposed to contempt and hostile acts.

When Freud came across this phenomenon in the analytical situation he determined to find its root cause. He discovered that the patient's emotional attitude to the analyst in the cure was determined by the patterns of his past development. He liked or disliked the analyst not because of the analyst's actual qualities, but because he was acting out his old patterns against him.

In the first phases of an analysis the positive transference was a very important adjunct. It formed the basis of the patient's confidence, and allowed him to transmit his secrets.

Dr. Peto described in detail a case of hysteria with its usual course of the transference, and said that on the whole it followed the same line as the patient's object-relations in general.

The development of the transference situation changed with every patient. The patient might start with a strong negative transference, but there was a very strong undercurrent, and the patient stayed in analysis.

Transference, though it was a great help to the treatment, aroused manifold resistances in the patient. The technique of analysis developed along the line of the handling and interpreting of the transference resistances. The resistances meant that the patient wished to adhere to the old ways of solving conflicts. The whole complex of the transference that the patient developed in the course of the analytical treatment was called by Freud the transference neurosis. He indicated by this that the patient's emotional attitudes to the analyst were nothing but a revival of his past emotional conflicts. Thus as the analyst dealt with the transference he was actually coping with the patient's neurosis.

Dr. Peto said that what he had outlined was only the most superficial structure of the transference neurosis which showed the explicit attitude of the patient in the object-relation. The transference neurosis of a thorough analysis revealed every stage of the instinctual and ego development of an individual. The earliest object-relations as well as those of the mature individual appeared in the patient's emotional relations with the analyst. At different stages of his analysis different developmental structures came into the foreground. The analyst's task was to interpret as many layers as possible. Dr. Peto quoted an example to clarify this important point and pointed out from it that many different stages of instinctual demands and different stages of ego development were projected in the case in the transference on to the analyst. It consisted of several layers which were important at different stages of the individual's development: (a) a mature heterosexual object-relation; (b) tender emotions of the preadolescent and adolescent girl towards her father; (c) sado-masochistic incestuous object-relations of the latency period (between her sixth and ninth years) towards her brother; (d) infantile homosexual feelings for the mother at the age of three to five years together with the tender feelings into which they merged.

The example quoted showed clearly what an important tool of interpretation and so of therapy was the correct and comprehensive analysis of the transference. The analyst had to decide how much of the material should be discussed with the patient at a given stage of his analysis, which elements of the transference were most ready for interpretation. As Freud had said, the analyst tried to melt the patient's rigid neurotic patterns in the heat of the transference. Thus the patient got the opportunity to exchange the fixed forms of infantile origin for more adaptable mature ones. The energy of frustrated and repressed infantile drives was freed and might be diverted



to a new integration of the ego and to the establishment of mature object-relations.

The analytical situation revived the past, but—and this was the salient point—it did not give satisfaction in the old ways. None of the patient's expectations came to fulfilment, neither his desires nor his fears. This was because the analyst's balanced attitude did not respond to the patient's expectations and stereotyped responses. The tension of the transference was further heightened by the basic rule which Freud introduced and named as the rule of abstinence. This meant that the whole procedure of analysis ought to be managed in words and only in words. Though there were modifications of this principle, abstinence was one of the fundamental rules of the therapy.

The concept of the abstinence referred first of all to the analytical situation itself. All emotions, thoughts and relations had to find a verbal outlet. The patient was forced to live through his inner conflicts without finding an external outlet, except in words. The analyst's aim was to maintain the damming-up of emotional tension through the handling of the transference. One aspect of every mental illness was that the patient could not bear tension to such an extent as was required in a series of traumatic situations. Disease and symptom meant a faulty solution after a failure in adaptation. The abstinence of the analytical situation forced the patient to learn how to bear tensions and so to find a mature adaptation.

Progress in research had drawn attention to the analysis of the negative transference. The importance of aggression and hate was recognized theoretically and clinically and their traumatic role fully realized. At present the analyst was mainly occupied with the transference-aggression; the handling of the positive transference did not raise major difficulties. The general rule of technique was that the negative transference should be analysed by its earliest appearance. Such a technique aimed to prevent the patient from running away or building up early resistances. If this rule was followed the positive transference took its course without any serious calamity. As the negative transference was continually interpreted and at the same time the principle of abstinence adhered to, dammed-up aggression played its important role in the treatment, finding outlet only within the limits of the analytical situation. Thus important repressed material could be won. The analysis of aggression was particularly important with obsession neurotics whose main conflicts centred around their fluctuating love and hate.

As transference was the precondition of analytical therapy, and abstinence was indispensable for its maintenance, only those persons were analysable who were able to build up a transference. This led to a discussion of those neurotics who acted out their tensions.

It was termed acting out when a patient who could not bear the abstinence of his transference neurosis tried to find an outlet for his tension outside the analytical situation. As a matter of fact, it was unavoidable that minor tensions of the transference should find outlet in the everyday life of the patient; affection or resentment that could not be lived out in relation to the analyst found gratification elsewhere. It was impracticable to hinder the patient in these activities. Nevertheless, the rule of abstinence, for the patient, meant that no decisive step should be taken during the analysis. The patient went through different infantile stages of object-relations and a gratification of one or more of them could harm him.

There were individuals, some of whom belonged to the vaguely defined class of the so-called psychopaths, who could not bear tensions and so were unable to accept the abstinence. They often broke off the analysis when they found out for certain that there was no room for physical gratification in the analytical situation.

The tendency to act out might take dangerous forms when the patient prematurely launched himself—in a phase of negative transference—into an unhappy and absolutely unsuitable relation to defy the analyst.

The next question was the major one—what kind of patients were able to build up a transference neurosis.

Freud had distinguished two groups of neurosis: (a) the transference neuroses (anxiety hysteria, conversion hysteria and obsession neurosis), so called because the patients were able to establish a transference and thus were approachable for analytical treatment; (b) the narcissistic neuroses—the psychoses in which the patients, according to Freud, were in such a deep state of regression that they were not able

to develop libidinous object-relations and so could not establish a transference. These, in his opinion, were not analysable.

The development of general analytical technique, particularly Ferenczi's work, the analysis of children, the growing research of analysts who worked in mental hospitals—all had contributed to the discovery that even psychotics who were in deep regression might develop libidinous object-relations to an extent that allowed the establishment of a transference. This relation to the analyst was delicate and fragile, but might serve with careful handling as a basis for building up relations to reality. The analytical approach to psychotics was only a systematic and extended utilization of such knowledge and the employment of analytical technique.

The analytical theory conceived the development of a psychotic process in the following way. Traumatic experiences might cause in individuals with a constitutional, biological predisposition the withdrawal of the libido from real objects. Depressive, manic and paranoid mechanisms aimed at restoring the balance between mental functions and reality. This unsuccessful attempt was represented by the symptoms. If a positive transference could be established fears of depressive and paranoid origin could be partly dissolved in the transference, and through the person of the analyst some kind of object-relation could be introduced. This result might establish partial social adaptation.

The psychoanalytical approach to schizophrenia was in its beginnings. Many controversial problems had yet to be clarified. It went without saying that abstinence must be modified in important ways dependent on the gravity of the case. The analyst should support the patient in every way during the acute phases, even to the extent of physical feeding. In cases in which the patient lived in society, the analyst adopted a more positive attitude than was acceptable with neurotics.

After short reference to the question of transference neurosis in the analysis of children, Dr. Peto said that deliberately a therapeutic factor had been neglected so far in his discussion, namely, the emotions and the attitude of the analyst. Psychoanalysis was practised as a two-body psychology, based on the emotional reactions of two persons, patient and analyst. So far only the patient had been discussed; now the analyst must be scrutinized.

The first papers of Freud on technique published about forty years previously had dealt with the analyst's conscious and unconscious attitudes and reactions in the analytical situation. The unconscious attitudes and reactions Freud called the countertransference. He realized that the analyst was also subjected to the analytical situation in that the patient's feelings provoked positive and negative emotional reactions in him. The fact that they came into the situation for different reasons, one as the sufferer, the other as the helper, did not make any difference in principle. Because Freud realized that the analyst's unconscious patterns of object-relations were of paramount importance, his demands on the future analyst grew higher and higher as deeper insight into the dynamics of the therapy was gained. At the beginning a fairly well-established theoretical knowledge was thought sufficient; later on a few months of analysis were required. Then it was gradually discovered that the more thorough the analyst's own analysis was, the less the strain on him, the less likelihood of his reacting with his own unconscious infantile patterns, and the greater the benefit to the patient.

Freud's claim was that the analyst's mind should be unbiased and unprejudiced from every point of view, devoid of any neurotic conflict; it should operate as a kind of mirror that gave an opportunity for the patient to visualize in the transference situation all his emotional patterns without their being distorted by the analyst's unconscious reactions. Freud realized, however, even in his first publications on the subject, that an absolutely neutral attitude would be inhuman, insincere and incompatible with the atmosphere of the transference situation.

The actual aim of training was to rid the analyst of open or hidden neurotic conflicts, to give him an accurate picture of his own development and to train him to discover, to analyse and to control his unconscious reactions. Nevertheless, he should not aim to be a machine without emotions and should not pretend to be one. His attitude should be one of free floating observation so that he was able to follow the stream of associations as one relatively detached. His unconscious thoughts might run parallel in this way with those of the patient in order to find contact with them at certain emotionally relevant points.



These patterns and emotions of the patient provoked archaic reactions in the unconscious of the analyst and so influenced his attitude in the present in terms of his own past. To realize and handle this countertransference was of paramount importance. In the same way that transference was the decisive assistance and simultaneously a permanent obstacle to the treatment of the patient; countertransference was the basic unconscious contact with the patient. Nevertheless, if it was not fully realized, it might definitely hamper the analyst in the unbiased understanding of the patient.

The analytical attitude meant to notice at once the signs of countertransference and to handle them by analysing the analyst's reactions. This appropriate handling would enable the analyst to relax, so that the patient's emotions could provoke—after penetrating the analyst's ego—an archaic, similar reaction in his unconscious. The next step was the decisive one for the therapy, to detach from this merging and to grasp it intellectually.

The course of the analysis comprised hundreds of situations and the understanding of the patient's and his own unconscious demanded a great adaptability in the therapist. The patient relied in the course of his analysis the different patterns of his whole development. The child loved and hated in different ways at different ages, so the analyst must register his own unconscious reactions and their conscious derivatives, and move parallel with all these swings of emotions which differed so much in maturity.

Finally, Dr. Peto emphasized that in the case of aggression also the analyst, after having registered his reaction, had to follow the same oscillation of merging with the unconscious of the patient and then to detach himself for the intellectual understanding.

In conclusion, Dr. Peto said that he had tried to outline an important factor of their therapy with its main theoretical and practical implications. Freud had stated that an analyst was one who accepted and was able to work with the transference, the resistance and the unconscious. He (Dr. Peto) had attempted to show the working out in practice of Freud's statement.

#### Group Psychotherapy.

DR. F. W. GRAHAM read a paper entitled "Some Impressions of Group Psychotherapy" (see page 48).

#### The Backlash of Change.

A paper entitled "The Backlash of Change" by Dr. John Bostock was read in his absence by Dr. D. W. H. ARNOTT (see page 50).

#### Psychopathic Personality.

DR. W. S. DAWSON read a paper entitled "Psychopathic Personality" (see page 54). This was the opening paper of a symposium on the subject.

DR. IRENE SEBIRE said that her experience of recent years had been limited to children and juveniles up to eighteen years of age. Some of these exhibited a certain type of personality pattern conforming to characteristics enumerated by many observers, and now classified by them as a psychopathic personality.

Although one tended to avoid classifications of individuals and to think more of personality types, there appeared to be a crystallization of certain qualities which were common to those individuals generally accepted as "psychopaths". The outstanding features covered, in their totality, an inability to identify with social concepts, behaviour of an emotionally immature, narcissistic, egocentric type, an indifference to, with an intellectual awareness of, social approval and disapproval, lack of affectional ties, an absence of guilt, self-reproach or embarrassment, and failure to respond to correction or therapy, or profit from experience. There seemed little doubt that these fairly clear-cut types did exist, whatever the term applied to them. Some psychiatrists believed that there was a group whose behaviour was not due to psychogenic and/or physical factors; they were called "primary psychopaths", and this indicated the presence of a constitutional factor. But it was difficult to prove convincingly that certain personality characteristics were due to inherited predispositions.

If one accepted the existence of a psychopathic personality, and if there was agreement as to the definition of classical characteristics, then it seemed reasonable to examine those

early developmental factors which they held in common. In the main, there was a history of maternal rejection or absence of maternal affection, preventing the development of a mutually satisfying relationship between mother and child. This might be due to lack of opportunity, or to a personality defect in the mother, often an undemonstrative, remote or unpredictable figure. Her inaccessibility, physically or emotionally, provided him with no incentive to gain her approval, or encourage that identification which formed the basis of conformity to socially acceptable behaviour. Thus he failed to develop a superego or social conscience, and so was devoid of feelings of guilt.

Outstanding examples of the effect of deprivation of maternal affection were seen in children subjected to mass child care in institutions and orphanages. In those circumstances impersonal upbringing limited or prevented normal social orientation and retarded social maturity. There was lack of opportunity for identification with a mother substitute, and a fixation might occur at more primitive modes of thinking and behaviour. Since guilt arose from threats to identification with object-relationships, this reaction was less likely in the child deprived in this regard.

The kind and degree of psychological disturbance following absence of maternal affection depended largely on the phase of development of the child's personality. If the child did not establish satisfying relationships with a clearly differentiated person during the first three years of its life, there was danger, according to Dr. Bender, of the development of a psychopathic personality. Dr. Lowrey referred to the "isolation personality" of children reared from infancy in an institution, where the acquisition of language and social maturity generally were impaired and delayed. He stated further, that there was no development of phantasy, as the expression of anti-social drives needed no substitute release. In his recent monograph "Maternal Care and Mental Hygiene", Dr. Bowlby agreed that findings at Tavistock Clinic supported those of Bender and Lowrey. Statistics and data collected by him from a variety of sources indicated that there was much in common between the early developmental history of the psychopath and that of the institutionalized dependent child who failed to build up affectional ties with a mother-substitute, and whose motives were predominantly asocial in character.

It was difficult to suggest at what age psychopathy was recognizable. This problem was associated with the question whether the condition was partial or entire. If entire, psychopathy was not really diagnosable until it was established in terms of an accepted definition. But certain circumstances surrounding the early development of a child, with related behaviour reactions, might be regarded as indicating a potential psychopathic personality.

The age at which social conscience developed as a reliable mechanism depended upon the stage when ethical judgments based on abstract concepts and practices could be self-determined. One would probably hesitate to diagnose psychopathy unreservedly in a child younger than, say, eleven or twelve years.

Any effective treatment of the psychopath would depend upon transforming his narcissistic, egocentric preoccupation into object-relationships. But since he lacked ability to establish an affectional tie to the therapist, the usual approach seemed to be unproductive. Since, however, the highest incidence of delinquency was at approximately thirteen years, and one-half of crimes were committed prior to twenty-one years of age, it was possible that increasing maturity and the passing of adolescent impulsiveness brought some change in patterns of behaviour.

That might be due largely to an appreciation of the belief that "crime doesn't pay", while a desire to conform to conventionally accepted behaviour had not been incorporated necessarily into the "feelings" of the individual. For the psychopath, asocial conduct could still pay dividends in the currency and values coveted by him.

Any measures likely to combat psychopathy lay rather in prevention or alleviation of those circumstances which were conducive to a defective relationship, inadequate in quality and continuity, between mother and child. Foster placements and early adoption provided the most satisfying substitute family experiences for dependent children who seemed to be more prone to psychopathic functioning than those in an average family.

## Out of the Past.

*In this column will be published from time to time extracts, taken from medical journals, newspapers, official and historical records, diaries and so on, dealing with events connected with the early medical history of Australia.*

### SURGICAL OPERATION UNDER THE INFLUENCE OF CHLOROFORM.<sup>1</sup>

[Sydney Morning Herald, April 22, 1850.]

A short time since, a poor woman named Brandon a resident of Sydney was labouring under severe suffering from a malignant disease in the breast and applied to Dr GWYNNE of this town [Parramatta], for advice, which was most readily given, and everything that could be thought of tried, to lessen suffering and abate disease. All attempts, however, proved vain, and the only alternative left the poor woman was that of submitting to the operation of having the breast amputated. After mature consideration, a day was appointed, and Dr Gwynne, assisted by DR RUTTER, prepared the chloroform and applied it to the woman. It was found to have the desired effect of so completely composing the system that the breast was removed with little or no pain, and Mrs Brandon was sufficiently recovered to proceed home the fourth day after the operation.

## Correspondence.

### PUBLIC LECTURE BY PROFESSOR CHARLES BEST.

SIR: An event of great importance will be the visit to Australia of Professor Charles Best, C.B.E., M.A., D.S.C., F.R.S., F.R.C.P., the discoverer, with Sir Frederick Banting, of insulin. He comes as the guest of the Post-Graduate Committees in Medicine, and it has been agreed that he shall give one public lecture under the auspices of the Diabetic Association of Australia on Wednesday, August 13, at 8 p.m. in the Assembly Hall, Margaret Street, Sydney. This will be entitled "Insulin and the Diabetic Road". We commend this lecture to the medical profession for their own consideration, and ask their cooperation in informing their diabetic patients, who we hope will attend in large numbers. Admission is by silver coin.

Yours, etc.,

RUBY W. BOARD,  
President, The Diabetic Association of  
Australia.

Sydney,  
June 26, 1952.

## Post-Graduate Work.

### THE MELBOURNE PERMANENT POST-GRADUATE COMMITTEE.

#### REFRESHER COURSE IN GYNÆCOLOGY AND OBSTETRICS.

THE following is the programme for the general practitioners' refresher course in gynæcology and obstetrics to be held at the Women's Hospital, Carlton, Melbourne, from September 1 to 12, 1952:

<sup>1</sup> From the original in the Mitchell Library, Sydney. This seems to be the first record of the use of chloroform anaesthesia in Australia. Its first use in the Sydney Infirmary was by Dr. H. G. Alleyne in 1852 for amputation of a leg. It had, however, been used elsewhere also, for N. J. Dunlop (THE MEDICAL JOURNAL OF AUSTRALIA, 1927, Volume I, page 151) quotes from *The Medical Times and Gazette* (England), November, 1852, an account of a death under chloroform anaesthesia (possibly the first in Australia), which occurred in Melbourne in June or July, 1852. The patient, John Atkinson, had a fistula-in-ano. The surgeon was Mr. Thomas, the anaesthetist Mr. Baker. The inquest was held at the Clarendon Hotel before the coroner, W. B. Wilmot. The autopsy was conducted by Dr. Motherwell in the presence of Dr. Howit, Dr. Playne, Dr. Barker and Dr. Youl. Dr. Thomas in his evidence said, "I have frequently used the same chloroform in other cases", so that chloroform was used in Melbourne early in 1852, if not earlier.

September 1: 9.30 a.m., Dr. M. Mackie, "Difficulties Associated with Induction of Labour"; 11.15 a.m., professorial unit, "Vaginal Repair" (demonstration); 2.15 p.m., Dr. W. McI. Rose, "The Role of the Physician in an Obstetrical Hospital".

September 2: 9.30 a.m., Dr. N. De Garis, "Ante-Natal Problems" (demonstration); 11.15 a.m., Dr. J. W. Johnstone, "Surgery Associated with Sterility"; 2.15 p.m., Dr. W. P. Holman, "Role of Irradiation Therapy in Gynæcological Conditions"; 4 p.m., Dr. J. Colebatch, "Neo-Natal Infections".

September 3: 9.30 a.m., Dr. J. Smibert, "Ante-Partum Hæmorrhage"; 11.15 a.m., Dr. G. B. Bearham, "Pruritus and Vulval Conditions" (demonstration); 2.15 p.m., Dr. Colin Macdonald, "Contribution of Radiology to Obstetrics and Gynæcology".

September 4: 9.30 a.m., professorial unit, "Difficulties Encountered in Cæsarean Sections"; 11.15 a.m., Dr. D. F. Lawson, "Abdominal Hysterectomy" (demonstration); 2.15 p.m., Dr. K. McCaul, "Analgesia in Labour"; 3 p.m., Dr. Gordon Ley, "Sterility".

September 5: 9.30 a.m., Dr. W. J. Rawlings, "Post-Partum Hæmorrhage"; 11.15 a.m., Dr. A. M. Hill, "Cancer Surgery" (demonstration); 2.15 p.m., professorial unit, obstetrical and gynæcological quiz.

September 8: 9.30 a.m., Dr. G. Simpson, "Slow Labour"; 11.15 a.m., professorial unit, "Abdominal Hysterectomy" (demonstration); 2.15 p.m., Dr. J. W. Johnstone and Dr. W. I. Hayes, obstetrical and gynæcological quiz.

September 9: 9.30 a.m., Dr. W. M. Lemmon, "Why the Breech Baby May Die"; 11.15 a.m., Dr. C. K. Churches, "Vaginal Repair" (demonstration); 2.15 p.m., Dr. G. B. Bearham and Dr. G. Simpson, obstetrical and gynæcological quiz; 4 p.m., Dr. K. Campbell, "The Premature Infant".

September 10: 9.30 a.m., Dr. R. Rome, "Labour Ward Emergencies"; 11.15 a.m., Dr. H. B. Hattam, "Stress Incontinence Treated by Vaginal Repair"; 2.15 p.m., Dr. D. F. Lawson and Dr. W. M. Lemmon, obstetrical and gynæcological quiz.

September 11: 9.30 a.m., professorial unit, "Assessment of Disproportion"; 11.15 a.m., Dr. B. Anderson, "Endometriosis" (demonstration); 2.15 p.m., Dr. A. M. Hill and Dr. R. M. Rome, obstetrical and gynæcological quiz.

September 12: 9.30 a.m., Dr. W. I. Hayes, "Use and Abuse of Forceps"; 11.15 a.m., Dr. V. E. Hollyock, gynæcological demonstration; 2.15 p.m., Dr. H. F. Bettinger, "Macroscopic Diagnosis in Gynæcological Pathology".

In addition, there will be normal ward rounds by the honorary medical staff.

Residence at the hospital during the period is advised and may be available to early applicants.

It will be necessary for those attending to have negative throat swab findings in relation to hemolytic organisms before commencing the course.

Enrolments should be made with the Secretary of the Post-Graduate Committee as soon as possible, as the number which can be accommodated at the hospital is severely limited. The tuition fee, £10 10s., is payable to the Post-Graduate Committee; the fee for residence, £6 per week, is payable to the hospital.

#### PROGRAMME FOR AUGUST, 1952.

##### Overseas Lecturer.

Professor Charles H. Best has been invited to lecture in Australia by the Australian Post-Graduate Federation. He will deliver lectures in the Royal Australasian College of Surgeons building, Spring Street, Melbourne, on the following dates at 8.15 p.m.: Tuesday, August 5, "Insulin and Diabetes"; Friday, August 8, "Heparin and Thrombosis". A fee of 10s. 6d. per lecture is payable to the Melbourne Permanent Post-Graduate Committee.

##### Country Courses.

###### Ballarat.

A post-graduate lecture will be delivered at Ballarat on August 7, at 8 p.m., by Mr. J. I. Hayward on "The Scope of Modern Thoracic Surgery". Enrolments should be made with Dr. J. P. L. Griffiths, Secretary of the Ballarat Sub-division of the British Medical Association, 29 Errard Street North, Ballarat. Telephone: 350. The fee will be 10s. 6d.

*Flinders Naval Depot.*

Dr. John Colebatch will lecture on "The Diagnosis of Anæmia" at the Flinders Naval Depot on August 13 at 2.30 p.m. This is by arrangement with the Royal Australian Navy.

### THE POST-GRADUATE COMMITTEE IN MEDICINE IN THE UNIVERSITY OF SYDNEY.

#### Courses for Part I of D.A., D.G.O., D.L.O. and D.O.

THE Post-Graduate Committee in Medicine in the University of Sydney announces that the courses for candidates for Part I of diplomas in anaesthesia, gynaecology and obstetrics, laryngology and otorhinology, and ophthalmology will begin on September 8, 1952, for a period of twelve weeks. All lectures and demonstrations will be held at the university in the afternoons only. Details of these courses may be obtained from the office of the Post-Graduate Committee. Early enrolment is essential, and application should be made to the Honorary Director, the Post-Graduate Committee in Medicine, 131 Macquarie Street, Sydney. Telephones: BU 5238, BW 7483.

#### Professor G. F. Gibberd.

In conjunction with the Royal College of Obstetricians and Gynaecologists, the following two lectures will be given by Professor G. F. Gibberd, M.B., M.S., F.R.C.S., F.R.C.O.G., Senior Obstetrical Surgeon at Guy's Hospital, and first Sims-Black Professor, during his visit to Sydney: Tuesday, July 22, "Toxæmia, Hypertension, Chronic Nephritis"; Thursday, July 24, "Third Stage of Labour". Both these lectures will be given in the Stawell Hall, 145 Macquarie Street, Sydney, at 8 p.m. Those who wish to attend these lectures, and who are not members of the annual subscription course, are asked to communicate with the Post-Graduate Committee in Medicine. Telephones: BU 5238, BW 7483.

### Congress Notes.

#### AUSTRALASIAN MEDICAL CONGRESS (BRITISH MEDICAL ASSOCIATION).

##### Summaries of Papers.

THE Editor of THE MEDICAL JOURNAL OF AUSTRALIA would be grateful if those who are to read papers during the Congress would supply him with a short summary of the paper for use in the preparation of the Congress number of the journal.

### The Royal Australasian College of Physicians.

#### FOURTEENTH ANNUAL MEETING.

THE fourteenth annual meeting of The Royal Australasian College of Physicians was held at Adelaide, South Australia, from May 28 to 31, 1952.

The office-bearers of the College for 1952-1954 took office at this meeting. They are as follows: Dr. Alex Murphy (President), Dr. J. G. Hayden, Dr. Guy London and Dr. I. M. Allen (Vice-Presidents), Dr. C. G. McDonald (Censor-in-Chief), Dr. H. Maynard Rennie (Honorary Secretary) and Dr. W. P. MacCallum (Honorary Treasurer). Councillors of the College are: Sir Charles Blackburn, Dr. Clive Fitts, Dr. T. M. Greenaway, Dr. J. G. Hayden, Dr. A. Holmes à Court, Dr. F. Ray Hone, Dr. Bruce Hunt, Dr. Alex P. Murphy, Sir Wilberforce Newton, Dr. S. A. Smith, Dr. Allan S. Walker, Dr. Ralph Whishaw, Dr. Ian J. Wood, Dr. J. J. Billings and Dr. James Isbister.

The following Members were elected by the General Body of Fellows to Fellowship of the College: Dr. C. G. Bayliss (New South Wales), Dr. J. H. Colebatch (Victoria), Dr. K. J. Grice (Victoria) and Dr. W. E. King (Victoria).

Prior to the meeting examinations for membership were held in both Australia and New Zealand, and the following successful candidates were admitted by Council to membership of the College: Dr. J. L. Allsop, Dr. G. E. Bauer, Dr.

B. P. Billington, Dr. P. F. Hall, Dr. D. W. Piper, Dr. George Selby, Dr. B. C. Sinclair-Smith, Dr. I. D. Thomas, Dr. Arnold Tink and Dr. R. H. Vines, of New South Wales; Dr. A. L. Anderson, Dr. A. A. Ferris, Dr. A. J. Goble, I. R. Mackay, Dr. T. G. Maddison and Dr. J. W. Perry, of Victoria; Dr. J. J. Fitzwater, Dr. D. A. Henderson and Dr. V. E. Sampson, of Queensland; Dr. D. A. Ballantyne, Dr. J. V. Cable, Dr. R. G. Dreadon, Dr. Christopher Gresson, Dr. K. H. Holdgate, Dr. C. W. Howden, Dr. J. D. Hunter, Dr. Derrick Tomlinson, Dr. C. E. Watson and Dr. A. S. Turner, of New Zealand.

The annual meeting of the College will take place at Hobart in the second week in March, 1953.

### EXAMINATION FOR MEMBERSHIP.

INTENDING candidates for the examination for membership of The Royal Australasian College of Physicians to be held in September-October, 1952, are reminded that applications for this examination close on Saturday, August 9, 1952. Application forms may be obtained from the Honorary Secretary, 145 Macquarie Street, Sydney.

The written examination will take place in capital cities where candidates are offering on Saturday, September 6, 1952, and the clinical examination will be held in Sydney from approximately Tuesday, October 14, to Thursday, October 16, 1952.

### The Royal College of Obstetricians and Gynaecologists.

#### PROFESSOR GIBBERD'S BRISBANE LECTURES.

DURING his visit to Brisbane Professor G. F. Gibberd, the first Sims-Black travelling Professor in Obstetrics and Gynaecology, will give an "open" lecture at the Medical School at 8.15 p.m. on Tuesday, July 29, 1952. His subject will be "Hypertension, Chronic Nephritis and the Toxæmias of Pregnancy". All interested members of the profession are invited to attend.

### Naval, Military and Air Force.

#### APPOINTMENTS.

THE undermentioned appointments, changes *et cetera* have been promulgated in the *Commonwealth of Australia Gazette*, Number 40, of June 5, 1952.

##### AUSTRALIAN MILITARY FORCES.

##### Royal Australian Army Medical Corps (Medical).

3/40099 Captain (provisionally) J. M. Bradley is transferred from the Citizen Military Forces, and to be Captain, 10th April, 1952.

The following officers relinquish the provisional rank of Captain and are transferred to the Reserve of Officers (Royal Australian Army Medical Corps (Medical)) (3rd Military District) in the honorary rank of Captain, 1st April, 1952: VX700265 K. S. Goulston and VX700266 E. J. B. Trembath.

To be Captains (provisionally), 28th March, 1952.—VX70027 John George Hamilton Refshauge and VX700273 Frank Ivor Bishop.

VX14663 Colonel (Temporary Brigadier) C. W. Nye, O.B.E., E.D., from command British Commonwealth Occupation Force General Hospital, and performing duties of Assistant Director of Medical Services, Headquarters, British Commonwealth Occupation Force, and Deputy Director of Medical Services, Administrative Headquarters, British Commonwealth Forces in Korea, is appointed Deputy Director of Medical Services, Headquarters, British Commonwealth Forces in Korea and British Commonwealth Occupation Force, 15th December, 1951.

NX700261 Captain (Temporary Lieutenant-Colonel) N. C. Davis relinquishes the temporary rank of Lieutenant-Colonel and is transferred to the Reserve of Officers (Royal Australian Army Medical Corps (Medical)) (2nd Military District), 6th March, 1952.



VX700257 Captain (provisionally) A. N. Jones relinquishes the provisional rank of Captain and is transferred to the Reserve of Officers (Royal Australian Army Medical Corps (Medical)) (3rd Military District) in the honorary rank of Captain, 4th March, 1952.

The following officers relinquish the provisional rank of Captain and are transferred to the Reserve of Officers (Royal Australian Army Medical Corps (Medical)) (1st Military District) in the honorary rank of Captain: QX700138 C. L. Cilento and QX700137 A. M. Horner, 11th February, 1952, and QX700143 M. G. Williams and QX700144 G. B. Roberts, 10th March, 1952.

N393154 Captain J. R. Kay Mouat is placed upon the Retired List (2nd Military District) with permission to retain his rank and wear the prescribed uniform, 15th March, 1952.

**To be Captains (provisionally).**—VX700260 Frank Gerald Silberberg, 30th January, 1952, VX700265 Keith Sydney Goulston, 29th February, 1952, VX700266 Edmund Jack Bennett Trembath, 3rd March, 1952, VX700269 Thomas Francis Spring, 7th March, 1952, and QX700155 John Francis O'Duffy, 7th April, 1952.

#### Citizen Military Forces.

##### Northern Command: First Military District.

**Royal Australian Army Medical Corps (Medical).**—1/32977 Honorary Captain I. D. Forbes is appointed from the Reserve of Officers, and to be Captain (provisionally), 29th January, 1952. 1/39086 Captain (provisionally) W. H. Tait relinquishes the provisional rank of Captain and is transferred to the Reserve of Officers (Royal Australian Army Medical Corps (Medical)) (1st Military District) in the honorary rank of Captain, 30th March, 1952.

##### Eastern Command: Second Military District.

**Royal Australian Army Medical Corps (Medical).**—The provisional rank of 2/127800 Lieutenant-Colonel J. F. Sullivan, M.C., is confirmed. The notification respecting the appointment of 2/130100 Captain (provisionally) M. W. Guymer, which appeared in Executive Minute No. 32 of 1952, promulgated in *Commonwealth Gazette*, No. 22, of 1952, is withdrawn. 2/127810 Captain E. G. Laver is appointed from the Reserve of Officers, 6th March, 1952, with regimental seniority next after 2/121942 Captain (provisionally) J. H. Lancken, and to be Temporary Major, 21st April, 1952. To be Captain (provisionally), 9th April, 1952: 2/127879 Edmund John Hennessy.

**Royal Australian Army Medical Corps (Medical).**—2/55838 Lieutenant B. Low is appointed from the Reserve of Officers, and to be Captain (provisionally), 5th February, 1952. To be Captain (provisionally), 28th March, 1952: 2/130104 Kenneth Henry Stephen Cooke.

##### Southern Command: Third Military District.

**Royal Australian Army Medical Corps (Medical).**—3/101814 Captain (provisionally) J. M. Bradley is transferred to the Interim Army, 10th April, 1952.

##### Central Command: Fourth Military District.

**Royal Australian Army Medical Corps (Medical): To be Major, 28th March, 1952.**—4/31911 Captain F. E. Welch.

##### Western Command: Fifth Military District.

**Royal Australian Army Medical Corps (Medical).**—The regimental seniority of 5/38060 Captain T. Godlee, M.B.E., is next after 5/32253 Captain M. Mayrhofer. The regimental seniority of 5/21508 Captain (Honorary Major) M. G. F. Doonan is next after 5/38060 Captain T. Godlee, M.B.E. 5/32063 Major W. P. White is placed upon the Retired List (5th Military District) with permission to retain his rank and wear the prescribed uniform, 11th March, 1952. To be Captains (provisionally): 5/39280 Ewart Austral Smith with regimental seniority next before 5/26507 Captain (provisionally) N. Same, and 5/32072 Ernest James England with regimental seniority next before 5/26509 Captain (provisionally) H. J. H. Colebatch, 3rd March, 1952, and 5/10736 George Marshall Nunn, 2nd April, 1952.

**Royal Australian Army Medical Corps (Medical): To be Captain (provisionally), 21st March, 1952.**—5/34602 Francis Alphonsus Murphy.

##### Tasmanian Command: Sixth Military District.

**Royal Australian Army Medical Corps (Medical): To be Captain (provisionally), 4th April, 1952.**—6/15245 Barry Anthony Smithurst.

#### Reserve Citizen Military Forces.

##### Royal Australian Army Medical Corps (Medical).

**1st Military District.**—Lieutenant E. J. Esler is transferred from the Reserve Citizen Military Forces (Royal Australian Corps of Signals) (1st Military District) and to be Honorary Captain, 21st April, 1952.

**2nd Military District:** To be Honorary Captain, 10th April, 1952.—Edward John Lines.

**1st Military District:** To be Honorary Captain, 9th April, 1952.—James Henry Steel.

**2nd Military District:** To be Honorary Captain, 9th April, 1952.—Charles Allan Shearer.

**3rd Military District.**—Lieutenant A. W. Riseborough is transferred from the Reserve of Officers (Royal Australian Artillery) (3rd Military District) and to be Honorary Captain, 4th April, 1952.

The following officers are placed upon the Retired List within Military Districts and on the dates as shown, with permission to retain their rank and wear the prescribed uniform:

**5th Military District.**—Lieutenant-Colonel G. R. Troup and Captain W. Muir, 22nd April, 1952.—(Ex. Min. No. 97—Approved 29th May, 1952.)

## Obituary.

### JAMES SPITTAL BUCHANAN.

We are indebted to Dr. Balcombe Quick for the following appreciation of the late Dr. James Spittal Buchanan.

James Spittal Buchanan has passed on to join his Scottish forebears at the ripe age of eighty-five years, leaving behind him, in the memories of those who were his old students and residents, his former patients, and in particular, perhaps, his colleagues, nothing but regard and affection.

Born at Berwick, Victoria, in 1867 and educated at Ballarat College, Buchanan qualified M.B., Ch.M. at Glasgow in 1890. Then, after a period of three years in which, as house surgeon in Leeds, he became associated with Mayo Robson, he took his M.R.C.S., L.R.C.P. in 1893 and was successful a year later in his Fellowship examination. That Mayo Robson thought highly of the young man was evidenced by the offer to him of a private assistantship. Such an offer was not one to be lightly refused, but in the event the position was filled by one Moynihan, later to become Sir Berkeley Moynihan, P.R.C.S., and Buchanan returned to Australia. He brought with him the ideas and standards of Mayo Robson, at that time a leader in British surgery, to whose work Buchanan often referred.

Buchanan was then twenty-nine years old, and he began practice in Collins Street, combating the first lean years of establishment by several lodge appointments; but with growing recognition of his surgical ability, these were one by one relinquished in favour of other young men on the threshold of their careers. In 1902 he was appointed surgeon to out-patients at the Alfred Hospital, and ten years later he became indoor surgeon, a position which he held until his resignation in 1928. An appointment as consulting surgeon followed, and he was a valued member of the Board of Management for nearly twenty years. During his years of active practice Buchanan held also the position of consulting surgeon to the Victorian Eye and Ear Hospital, and in the first World War he was visiting surgeon to Caulfield Military Hospital with the rank of major.

Such a brief summary of a long life conveys little of the man himself, of his robust personality and his sterling worth. The outstanding characteristics of James Buchanan were his sturdy manhood, his utter fearlessness and his intolerance of anything that to him savoured in the least of the shady or unethical. To him black was never grey; there was never room for doubt. Out would go his jaw, and a characteristic hunching of the shoulders was the preliminary to a denunciation of the offender. Nor was he only a champion of the abstract right, for the welfare of those who had entrusted themselves to his care was his first consideration. It was little wonder that he inspired such affection amongst his patients.

As a young man Buchanan was a useful lightweight boxer, and later he loved his game of golf, taking some friend with him in a hired hansom cab to the old Fisherman's Bend links when the afternoon's work was over, there to

wait until the round was finished. In later years his garden was his solace and his hobby.

James Buchanan's first wife, who predeceased him by a number of years, was Dr. Freda Gamble, and in 1948 he married Miss Sylvia Gray. With his death there disappears almost the last of those stalwarts of last century and the earlier years of this who made their homes and reared their families behind their consulting rooms in Collins Street. It was there that his family of two sons was born—James M. Buchanan, F.R.C.S., and A. Russell Buchanan, M.D., M.R.C.P.

Dr. Archie Anderson writes: I first met James Buchanan in 1918 when, on my return from World War I, I was his resident medical officer at Number 5 Australian General Hospital, St. Kilda Road. Our association there was brief, but sufficient to arouse in me a great respect for him, a sentiment which became increasingly suffused with affection in the ensuing years. On his technical skill as a surgeon I was not qualified to comment, but I was immediately impressed by the soundness of his judgement, informed as it was by wide knowledge and governed by what he termed "horse sense". To him the patient was first and foremost a fellow creature, whose clinical problem had to be approached from this human angle. How often has one heard him say: "Yes, of course I'd like to do a laparotomy and have a look, but after all, son, don't forget it's his belly!" His entry into ward or theatre was like a gust of fresh air, for he radiated a robustness and cheerfulness that influenced all around him, and his smile was a stimulus to the faint-hearted and a benediction to all. Though possessed of wide experience and knowledge, he yet retained to the very end much of the boy in his nature, a "delight in simple things and mirth that hath no bitter springs". He had very definite opinions and upheld them with great intensity, even ferocity, but he could differ without quarrelling and argue without bitterness. He made no great outward show of religion, but his was a deeply spiritual nature, as evidenced by his uprightness of character, charity of judgement and humanity of outlook. Dear old "Buck". We will miss him!

#### PATRICK WILLIAM RICE.

DR. PATRICK WILLIAM RICE, who had been for many years practising in Torrensville, South Australia, died on March 7, 1952.

Rice was born in 1889 and was educated in the country. For his secondary education he was himself responsible, and his later career showed his scholastic ability. He served his apprenticeship as a chemist and became duly qualified, and while doing this he decided to study medicine. The quality of his brain was shown by the fact that he topped every year during his medical course and obtained the Thomas Davies Scholarship (twice) and the Everard Prize. On completing his course he married Miss Ruby Hill.

During the first World War Rice served in the army in New Guinea and later at the Seventh Australian General Hospital with the rank of major. After the war he started in practice at Torrensville, where his knowledge, skill and kindly manner soon enabled him to acquire a large practice, which he carried on until his death. In 1935 he went to England and sat for the examination for the diploma of the Royal College of Obstetricians and Gynaecologists; again he came through at the head of the list. Although interested in surgery and gynaecology, Rice was unable to sever himself from his numerous old patients and had to carry on his large general practice.

Apart from his work, Rice's chief interests were racing in the earlier days and finally trotting, with which he was associated until his death. He was also a staunch member and friend of the Returned Sailors, Soldiers and Airmen's Imperial League of Australia and did particularly fine work for the Sailors and Soldiers' Distress Fund. On many occasions he gave free medical advice to ex-servicemen in poor circumstances and to dependants of deceased ex-servicemen. He leaves a daughter and one son, Dr. Laurence Rice.

#### REGINALD JAMES NASH.

We regret to announce the death of Dr. Reginald James Nash, which occurred on June 23, 1952, at Brisbane, Queensland.

#### JOHN JAMES KITCHEN.

We regret to announce the death of Dr. John James Kitchen, which occurred on June 24, 1952, at Kew, Victoria.

#### CHARLES BAZETT DEANE-BUTCHER.

We regret to announce the death of Dr. Charles Bazett Deane-Butcher, which occurred on July 1, 1952, at Warwick, Queensland.

### Australian Medical Board Proceedings.

#### NEW SOUTH WALES.

The following have been registered, pursuant to the provisions of the *Medical Practitioners Act*, 1938-1950, as duly qualified medical practitioners: Baird, Neil McAlpine, M.B., Ch.B., 1949 (Univ. Glasgow); Berents, Helen, M.R.C.S. (England), L.R.C.P. (London), 1940; Donnelly, Michael Francis, M.B., B.Ch., 1944, M.D., 1949, M.R.C.P. (London), 1949; Keet, Anna Mathilda, M.B., B.Ch., 1947 (Univ. Witwatersrand), D.P.H., 1951; Lennon, Vincent Francis Bennett, M.B., B.S., 1930 (Univ. Adelaide); Levene, Maurice Mordecai, M.R.C.S. (England), L.R.C.P. (London), 1951; Morlet, Jack, M.B., B.S., 1913 (Univ. Melbourne); Murphy, Christopher Anthony Blackstone, M.R.C.S. (England), L.R.C.P. (London), 1942; Walker, John Adrian Mozar, M.B., B.S., 1951 (Univ. Adelaide); Whyte, Henry Malcolm, M.B., B.S., 1944 (Univ. Queensland), M.R.C.P. (London), 1951; Wilson, Keith John, M.B., B.S., 1952 (Univ. Adelaide).

Gall, John Francis, M.B., B.S., 1952 (Univ. Sydney); Garton, David Sydney, M.B., B.S., 1952 (Univ. Sydney); Gatenby, James Alfred, M.B., B.S., 1952 (Univ. Sydney); Gaynor, Brian Seymour, M.B., B.S., 1952 (Univ. Sydney); Gillespie, Arthur Donald Francis, M.B., B.S., 1952 (Univ. Sydney); Glass, Julian Bernard, M.B., B.S., 1952 (Univ. Sydney); Glass, Kenneth David, M.B., B.S., 1952 (Univ. Sydney); Goard, Kenneth Edwin, M.B., B.S., 1952 (Univ. Sydney); Goldman, Louis Milton, M.B., B.S., 1952 (Univ. Sydney); Gomm, Audrey Mabel, M.B., B.S., 1952 (Univ. Sydney); Goodman, Benjamin Nathan, M.B., B.S., 1952 (Univ. Sydney); Goulston, Roy Frank, M.B., B.S., 1952 (Univ. Sydney); Govorko, Laddie Alexander, M.B., B.S., 1952 (Univ. Sydney); Green, Betty Florence, M.B., B.S., 1952 (Univ. Sydney); Greenacre, Eric Ross, M.B., B.S., 1952 (Univ. Sydney); Guy, Keith Butler, M.B., B.S., 1952 (Univ. Sydney); Guyot, John Raymond Blee, M.B., B.S., 1952 (Univ. Sydney).

Haddan, Frank Ellison, M.B., B.S., 1952 (Univ. Sydney); Hallett, Philip, M.B., B.S., 1952 (Univ. Sydney); Halliday, George Macanish, M.B., B.S., 1952 (Univ. Sydney); Hanks, Geoffrey Noel, M.B., B.S. (Univ. Sydney); Harbison, Douglas John, M.B., B.S., 1952 (Univ. Sydney); Harding, James Michael, M.B., B.S., 1952 (Univ. Sydney); Hardwicke, Noelene Joan, M.B., B.S., 1952 (Univ. Sydney); Harley, John Douglas, M.B., B.S., 1952 (Univ. Sydney); Hart, John Kirley, M.B., B.S., 1952 (Univ. Sydney); Hassall, John Everard, M.B., B.S., 1952 (Univ. Sydney); Hawke, Pamela Joan, M.B., B.S., 1952 (Univ. Sydney); Hewson, Alan Donald, M.B., B.S., 1952 (Univ. Sydney); Hibbard, Loraine Clare, M.B., B.S., 1952 (Univ. Sydney); Hickson, George Kendle, M.B., B.S., 1952 (Univ. Sydney); Holland, Robert Alastair Beveridge, M.B., B.S., 1952 (Univ. Sydney); Holland, Ross Beresford, M.B., B.S., 1952 (Univ. Sydney); Holliday, Richard Edward Henry, M.B., B.S., 1952 (Univ. Sydney); Holliday, Una Joan, M.B., B.S., 1952 (Univ. Sydney); Hornbrook, Alan Francis, M.B., B.S., 1952 (Univ. Sydney); Houghton, Roy Malcolm, M.B., B.S., 1952 (Univ. Sydney); Hughes, Joan Eleanor, M.B., B.S., 1952 (Univ. Sydney); Hull, Arthur David Poole, M.B., B.S., 1952 (Univ. Sydney); Humphris, Philip Blake, M.B., B.S., 1952 (Univ. Sydney).

Ibery, Peter Leslie Thomas, M.B., B.S., 1952 (Univ. Sydney).

Jenkins, Ronald George, M.B., B.S., 1952 (Univ. Sydney); Jolley, Amy Beryl, M.B., B.S., 1952 (Univ. Sydney); Jones, Robert Francis Clifford, M.B., B.S., 1952 (Univ. Sydney); Joneshart, Cyril Luke, M.B., B.S., 1952 (Univ. Sydney).

Kalokerinos, Emmanuel, M.B., B.S., 1952 (Univ. Sydney); Keatinge, Richard Harte, M.B., B.S., 1952 (Univ. Sydney); Keldoulis, Theo, M.B., B.S., 1952 (Univ. Sydney); Kendall,

Peter Paul, M.B., B.S., 1952 (Univ. Sydney); Kent, Peter William, M.B., B.S., 1952 (Univ. Sydney); Kerr, Elaine Kathleen, M.B., B.S., 1952 (Univ. Sydney); Kiely, Philip Edmund, M.B., B.S., 1952 (Univ. Sydney); Kirby, John Fulford, M.B., B.S., 1952 (Univ. Sydney); Kronenberg, Harry, M.B., B.S., 1952 (Univ. Sydney).

Langsford, William Andrew, M.B., B.S., 1952 (Univ. Sydney); Law, John Richard, M.B., B.S., 1952 (Univ. Sydney); Liggins, Anthony William, M.B., B.S., 1952 (Univ. Sydney); Lines, Edward John, M.B., B.S., 1952 (Univ. Sydney); Lochhead, Reginald Noble, M.B., B.S., 1952 (Univ. Sydney); Longley, Eric Osborne, M.B., B.S., 1952 (Univ. Sydney); Lopes, Anthony Giuseppe, M.B., B.S., 1952 (Univ. Sydney); Lorence, George Stephen, M.B., B.S., 1952 (Univ. Sydney); Lu, Earl Ming Teh, M.B., B.S., 1952 (Univ. Sydney); Lush, Paul Joseph, M.B., B.S., 1952 (Univ. Sydney); Lyons, William John, M.B., B.S., 1952 (Univ. Sydney).

McCullough, Russell Hugh, M.B., B.S., 1952 (Univ. Sydney); McGonigal, Keith James, M.B., B.S., 1952 (Univ. Sydney); McIntyre, John Donald, M.B., B.S., 1952 (Univ. Sydney); MacKenzie, Douglas Cameron, M.B., B.S., 1952 (Univ. Sydney); McKerhan, Robert Henry Kenrick, M.B., B.S., 1952 (Univ. Sydney); McLaughlin, John Mannix, M.B., B.S., 1952 (Univ. Sydney); Maegraith, Ruth Tresilian, M.B., B.S., 1952 (Univ. Sydney); Maffesoni, Keith Ernest, M.B., B.S., 1952 (Univ. Sydney); Maginnity, Leo Kevin, M.B., B.S., 1952 (Univ. Sydney); Maloney, Peter John, M.B., B.S., 1952 (Univ. Sydney); Manning, Rene Lionel, M.B., B.S., 1952 (Univ. Sydney); Marr, Donald John, M.B., B.S., 1952 (Univ. Sydney); Masters, Harold Elliott, M.B., B.S., 1952 (Univ. Sydney); Matthews, Ernest, M.B., B.S., 1952 (Univ. Sydney); Maxwell, Ian, M.B., B.S., 1952 (Univ. Sydney); Mayne, Stephen Leigh, M.B., B.S., 1952 (Univ. Sydney); Meers, Harold Neil, M.B., B.S., 1952 (Univ. Sydney); Meredith, John Evan, M.B., B.S., 1952 (Univ. Sydney); Merten, Kenneth Kurt, M.B., B.S., 1952 (Univ. Sydney); Messmer, Bruce Anthony, M.B., B.S., 1952 (Univ. Sydney); Minogue, Francis John, M.B., B.S., 1952 (Univ. Sydney); Mitchell, James Frederick, M.B., B.S., 1952 (Univ. Sydney); Moore, Keith Patrick, William, M.B., B.S., 1952 (Univ. Sydney); Morgan, Michael Francis, M.B., B.S., 1952 (Univ. Sydney); Morgan, William Andrew Distin, M.B., B.S., 1952 (Univ. Sydney);

Morison, Bruce Dudley, M.B., B.S., 1952 (Univ. Sydney); Morris, John, M.B., B.S., 1952 (Univ. Sydney); Morris, Robert Barry, M.B., B.S., 1952 (Univ. Sydney); Morrison, Patrick Thomas, M.B., B.S., 1952 (Univ. Sydney); Morton, David Charles, M.B., B.S., 1952 (Univ. Sydney); Muir, William McCartney, M.B., B.S., 1952 (Univ. Sydney); Murphy, Kevin Michael, M.B., B.S., 1952 (Univ. Sydney).

Nelson, John Ross, M.B., B.S., 1952 (Univ. Sydney); Nelson, Merran Mitchell, M.B., B.S., 1952 (Univ. Sydney); Nicholas, Judith Nella, M.B., B.S., 1952 (Univ. Sydney); Nolan, Thomas Patrick, M.B., B.S., 1952 (Univ. Sydney).

O'Connor, Kevin, M.B., B.S., 1952 (Univ. Sydney); O'Neill, Brian Allen, M.B., B.S., 1952 (Univ. Sydney); O'Neill, Thomas Joseph, M.B., B.S., 1952 (Univ. Sydney).

Palmer, Peter Scott, M.B., B.S., 1952 (Univ. Sydney); Parker, John Jerome, M.B., B.S., 1952 (Univ. Sydney); Paton, John Robert, M.B., B.S., 1952 (Univ. Sydney); Patterson, William Hugh, M.B., B.S., 1952 (Univ. Sydney); Paver, William Kenneth Amedee, M.B., B.S., 1952 (Univ. Sydney); Pearson, Barry Clive, M.B., B.S., 1952 (Univ. Sydney); Pepper, Arthur Cecil, M.B., B.S., 1952 (Univ. Sydney); Pickering, Peter Howard, M.B., B.S., 1952 (Univ. Sydney); Pierce, Betty Ellen, M.B., B.S., 1952 (Univ. Sydney); Pountney, Richard Knowles, M.B., B.S., 1952 (Univ. Sydney); Pozniak, Maurice, M.B., B.S., 1952 (Univ. Sydney); Pryde, Donald Lowes Ainsworth, M.B., B.S., 1952 (Univ. Sydney).

Rae, James Lyle, M.B., B.S., 1952 (Univ. Sydney); Rasmussen, Lionel Keith, M.B., B.S., 1952 (Univ. Sydney); Raymond, Arthur Wilmot, M.B., B.S., 1952 (Univ. Sydney); Read, John Robert, M.B., B.S., 1952 (Univ. Sydney); Reid, Robert Keith, M.B., B.S., 1952 (Univ. Sydney); Repin, George Dimitri, M.B., B.S., 1952 (Univ. Sydney); Robertson, Struan Birrell, M.B., B.S., 1952 (Univ. Sydney); Rogers, Elizabeth Mary, M.B., B.S., 1952 (Univ. Sydney); Rushworth, Robin Geoffrey, M.B., B.S., 1952 (Univ. Sydney); Russell-Jones, Colin Graham, M.B., B.S., 1952 (Univ. Sydney).

Sainsbury, Maurice Joseph, M.B., B.S., 1952 (Univ. Sydney); Sander, John Frederick, M.B., B.S., 1952 (Univ. Sydney); Saunders, Colin Bateson, M.B., B.S., 1952 (Univ. Sydney); Schubert, Wilfred, M.B., B.S., 1952 (Univ. Sydney); Segelov, John Nathan, M.B., B.S., 1952 (Univ. Sydney); Shapiro, Ralph Abraham, M.B., B.S., 1952 (Univ. Sydney); Shepherd, Alan Richard, M.B., B.S., 1952 (Univ. Sydney).

# DISEASES NOTIFIED IN EACH STATE AND TERRITORY OF AUSTRALIA FOR THE WEEK ENDED JUNE 14, 1952.<sup>1</sup>

Disease.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern Territory.	Australian Capital Territory.	Australia.
Acute Rheumatism .. ..	..	..	..	..	..	..	..	..	..
Amoebiasis .. ..	..	1	..	..	..	..	..	..	1
Ancylostomiasis .. ..	..	..	..	..	..	..	..	..	..
Anthrax .. ..	..	..	..	..	..	..	..	..	..
Bilharziasis .. ..	..	..	..	..	..	..	..	..	..
Brucellosis .. ..	..	1	..	..	..	..	..	..	1
Cholera .. ..	..	..	..	..	..	..	..	..	..
Chorea (St. Vitus) .. ..	..	..	..	..	..	..	..	..	..
Dengue .. ..	..	..	..	..	..	..	..	..	..
Diarrhoea (Infantile) .. ..	..	..	10(8)	..	..	..	..	..	10
Diphtheria .. ..	10(5)	6(3)	9(2)	..	9(7)	..	..	..	37
Dysentery (Bacillary) .. ..	..	..	9(4)	..	1	..	..	3	12
Encephalitis .. ..	1(1)	..	..	..	..	..	..	..	1
Filariasis .. ..	..	..	..	..	..	..	..	..	..
Homologous Serum Jaundice .. ..	..	..	..	..	..	..	..	..	..
Hydatid .. ..	..	1	..	..	..	..	..	..	1
Infective Hepatitis .. ..	..	1	..	..	14(7)	..	..	..	15
Lead Poisoning .. ..	..	..	..	..	..	..	..	..	..
Leprosy .. ..	..	..	..	..	..	..	..	..	..
Leptospirosis .. ..	..	..	..	..	..	..	..	..	..
Malaria .. ..	..	..	..	..	..	..	..	..	..
Meningococcal Infection .. ..	1(1)	7(4)	..	..	..	3	1	..	12
Ophthalmia .. ..	..	..	..	..	..	..	..	..	..
Ornithosis .. ..	..	..	..	..	..	..	..	..	..
Paratyphoid .. ..	..	..	..	..	..	..	..	..	..
Plague .. ..	..	..	..	..	..	..	..	..	..
Pollomyelitis .. ..	1	10(3)	5(2)	10(10)	..	..	2	..	28
Puerperal Fever .. ..	1	..	..	..	..	..	..	..	1
Rubella .. ..	..	3(3)	1(1)	..	1(1)	..	..	..	5
Salmonella Infection .. ..	..	..	..	..	..	..	..	..	..
Scarlet Fever .. ..	27(5)	17(8)	10(7)	3(3)	3(3)	12(8)	..	1	73
Smallpox .. ..	..	..	..	..	..	..	..	..	..
Tetanus .. ..	..	..	..	..	..	..	..	..	..
Trachoma .. ..	..	..	..	..	..	..	..	..	..
Trichinosis .. ..	..	..	..	..	..	..	..	..	..
Tuberculosis .. ..	35(25)	20(17)	12(9)	7(6)	6(3)	3(2)	..	..	83
Typhoid Fever .. ..	..	..	..	..	..	..	..	..	..
Typhus (Flea-, Mite- and Tick-borne) .. ..	..	..	1(1)	1(1)	1(1)	..	..	..	3
Typhus (Louse-borne) .. ..	..	..	..	..	..	..	..	..	..
Yellow Fever .. ..	..	..	..	..	..	..	..	..	..

<sup>1</sup> Figures in parentheses are those for the metropolitan area.



Sydney); Shulman, Albert, M.B., B.S., 1952 (Univ. Sydney); Sidoti, Eric Dominic, M.B., B.S., 1952 (Univ. Sydney); Sinclair, Russell Wade, M.B., B.S., 1952 (Univ. Sydney); Smith, Robert Darlow, M.B., B.S., 1952 (Univ. Sydney); Solling, Michael Cecil Rex, M.B., B.S., 1952 (Univ. Sydney); Steele, George Warwick, M.B., B.S., 1952 (Univ. Sydney); Steele-Smith, John Henry, M.B., B.S., 1952 (Univ. Sydney); Stern, Eric, M.B., B.S., 1952 (Univ. Sydney); Stitz, Alan James, M.B., B.S., 1952 (Univ. Sydney); Stonham, John Alfred Milner, M.B., B.S., 1952 (Univ. Sydney); Stump, Grahame Julian Witherington, M.B., B.S., 1952 (Univ. Sydney); Sturrock, John Barry, M.B., B.S., 1952 (Univ. Sydney).

Taylor, John Morris, M.B., B.S., 1952 (Univ. Sydney); Tennent, Marion Anne Isobel Hamilton McMahon, M.B., B.S., 1952 (Univ. Sydney); Thomas, Alan Dixon, M.B., B.S., 1952 (Univ. Sydney); Thompson, Arthur Richard, M.B., B.S., 1952 (Univ. Sydney); Thompson, Harold Lindsay, M.B., B.S., 1952 (Univ. Sydney); Thompson, Rodney Fourro, M.B., B.S., 1952 (Univ. Sydney); Thomson, Evan McKay, M.B., B.S., 1952 (Univ. Sydney); Thurlow, Harold William, M.B., B.S., 1952 (Univ. Sydney); Tow, Aubrey James, M.B., B.S., 1952 (Univ. Sydney); Towers, Barrie, M.B., B.S., 1952 (Univ. Sydney); Trevillian, Kenneth James, M.B., B.S., 1952 (Univ. Sydney); Trousdale, Donald Henry, M.B., B.S., 1952 (Univ. Sydney); Tugwell, Kingsley Frederic, M.B., B.S., 1952 (Univ. Sydney); Tunley, John Leslie, M.B., B.S., 1952 (Univ. Sydney); Tymms, Brian Blake, M.B., B.S., 1952 (Univ. Sydney).

Unger, Pia Michaela, M.B., B.S., 1952 (Univ. Sydney); Upton, Ralph Denison, M.B., B.S., 1952 (Univ. Sydney); Utber, Walter Beresford, M.B., B.S., 1952 (Univ. Sydney).

Vance, Richard Alan Bruce, M.B., B.S., 1952 (Univ. Sydney); Vaughan, Christian Ernest, M.B., B.S., 1952 (Univ. Sydney); Vickers, Brian Hugh Philip, M.B., B.S., 1952 (Univ. Sydney).

The following regional registration has been made: Dorosenko, Nicolae De Farmazon, M.D., 1945 (Bucharest); for practice in the Snowy Mountains region, as proclaimed in the *New South Wales Government Gazette*, Number 83, of April 10, 1952.

## Notice.

### THE THOMAS BAKER MEMORIAL FELLOWSHIP FOR 1953.

THE Council of the College of Radiologists (Aust. & N.Z.) has been empowered by the trustees of the Thomas Baker (Kodak), Alice Baker and Ellnor Shaw Benefactions to select a Fellow for 1953 to study abroad. The purpose of the Fellowship is to allow a qualified radiologist to further his knowledge in diagnostic or therapeutic radiology. This is the fourth Fellowship, and the value of the Fellowship is £1500 (Australian) tenable for fifteen months.

The Fellow shall be a British subject, a graduate of a university in Australia or New Zealand, and should hold a recognized radiological diploma and preferably a higher medical degree.

The Fellow shall undertake to return within two years and engage in the practice of radiology in Australia or New Zealand for at least two years. He shall furnish a report to the Council on his return.

Applications for this Fellowship must be made by September 10, 1952, to the Honorary Secretary, the College of Radiologists (Aust. & N.Z.), British Medical Association House, 135 Macquarie Street, Sydney, from whom application forms may be obtained.

## Medical Appointments.

The following appointments have been made, pursuant to the provisions of the *Mental Hygiene Act*, 1928, of Victoria: Dr. G. A. Goding to be superintendent of the Mental Hospital, Beechworth, and Dr. J. V. Ashburner to be superintendent of the Mental Hospital, Kew.

Dr. H. B. White has been appointed government medical officer at Gatton, Queensland.

Dr. J. V. Webb has been appointed government medical officer at Taroom, Queensland.

## Nominations and Elections.

THE undermentioned have applied for election as members of the New South Wales Branch of the British Medical Association:

Szarota, Stanislaw, registered in accordance with the *Medical Practitioners Act*, Section 17 (1) (c), 253 Clovelly Road, Clovelly, New South Wales.

Walker, David Gerard, M.B., B.S., 1951 (Univ. Sydney), 18 Goodlet Street, Ashfield, New South Wales.

Morgan, Noel John, M.B., B.S., 1951 (Univ. Sydney), 116 Nelson Street, Wallsend, New South Wales.

Anderson, Peter Francis, M.B., B.S., 1952 (Univ. Sydney), Lewisham Hospital, Lewisham, New South Wales.

## Diary for the Month.

JULY 14.—Victorian Branch, B.M.A.: Finance Subcommittee Meeting.

JULY 15.—New South Wales Branch, B.M.A.: Medical Politics Committee.

JULY 16.—Western Australian Branch, B.M.A.: General Meeting.

JULY 17.—Victorian Branch, B.M.A.: Executive Meeting.

JULY 22.—New South Wales Branch, B.M.A.: Ethics Committee.

## Medical Appointments: Important Notice.

MEDICAL PRACTITIONERS are requested not to apply for any appointment mentioned below without having first communicated with the Honorary Secretary of the Branch concerned, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

**New South Wales Branch** (Medical Secretary, 135 Macquarie Street, Sydney): All contract practice appointments in New South Wales.

**Victorian Branch** (Honorary Secretary, Medical Society Hall, East Melbourne): Associated Medical Services Limited; all Institutes or Medical Dispensaries; Australian Prudential Association, Proprietary, Limited; Federal Mutual Medical Benefit Society; Mutual National Provident Club; National Provident Association; Hospital or other appointments outside Victoria.

**Queensland Branch** (Honorary Secretary, B.M.A. House, 225 Wickham Terrace, Brisbane, B17): Brisbane Associated Friendly Societies' Medical Institute; Bundaberg Medical Institute. Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL or position outside Australia are advised, in their own interests, to submit a copy of their Agreement to the Council before signing.

**South Australian Branch** (Honorary Secretary, 178 North Terrace, Adelaide): All Contract Practice appointments in South Australia.

**Western Australian Branch** (Honorary Secretary, 205 Saint George's Terrace, Perth): Norseman Hospital: all Contract practice appointments in Western Australia. All government appointments with the exception of those of the Department of Public Health.

## Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

All communications should be addressed to the Editor, THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, New South Wales. (Telephones: MW 2651-2.)

Members and subscribers are requested to notify the Manager, THE MEDICAL JOURNAL OF AUSTRALIA, Seamer Street, Glebe, New South Wales, without delay, of any irregularity in the delivery of this journal. The management cannot accept any responsibility or recognize any claim arising out of non-receipt of journals unless such notification is received within one month.

**SUBSCRIPTION RATES.**—Medical students and others not receiving THE MEDICAL JOURNAL OF AUSTRALIA in virtue of membership of the Branches of the British Medical Association in the Commonwealth can become subscribers to the journal by applying to the Manager or through the usual agents and book-sellers. Subscriptions can commence at the beginning of any quarter and are renewable on December 31. The rate is £5 per annum within Australia and the British Commonwealth of Nations, and £6 10s. per annum within America and foreign countries, payable in advance.